

PO No	Supplier	Line No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit
P0039521	AC1001-VC	1	1	Net 30	M1018R1.125	M1018R1.125 ; MATERIAL: AISI 1018-1025 ROUND BAR MIL-S-7097 OR ASTM A108 receive ft				20	4/12/2018	20	S059685		Stock	4/10/2018	\$ 3.24 / ft
		2			MT-A513-T	A513 Seamless Alloy Steel Round Tubing 0.875"dia. x 0.120" Wall MATL: AS PER ASTM A513 TYPE 5 (1020/1026)SEAMLESS ALLOY STEEL ROUND TUBING (DOM) AS PER ASTM A513 TYPE 5				60		69	S059686		Stock	4/10/2018	\$ 2.06 / ft
		3			M6061T6B1.000X04.000	6061-T6 Bar 1.00 X 4.00 ; MATERIAL: 6061-T6/6511/6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft				24		24	S059687		Stock	4/10/2018	\$ 13.25 / ft
		4			M304R0.375	304 Round Bar 0.375 ; MATERIAL: AISI 304/316 SS ROUND BAR AS PER ASTM A276 NOTE: AISI 303 NOT ACCEPTABLE receive ft				24			S059688		Stock	4/10/2018	\$ 1.19 / ft
		5			MT-HRS-B-0.500X2.250	Hot Rolled Steel Bar 0.500" X 2.250" ; MATL: HOT ROLLED STEEL BAR AS PER ASTM A36 OR ASTM A1011 OR 44W OR ASTM A1018 receive ft				6		6	S059689		Stock	4/10/2018	\$ 6.70 / ft
		6			MT-1144-H0.250	AISI 1144 Stressproof Steel Hex Bar 0.250" MATL: SPEC'S: AISI 1144 STRESSPROOF STEEL HEX BAR ASTM A311 or UNS G11440				12		12	S059690		Stock	4/10/2018	\$ 5.27 / ft
		7			MT-1144-H0.500	MT-1144-H0.500				20		24	S059691		Stock	4/10/2018	\$ 1.18 / ft
		8			MT-4140-R0.625	MATL: SPEC'S AISI 4140 ROUND BAR MINIMUM ROCKWELL C = 20 Rc = 38 Rc AS PER ASTM A29. AMS 6349. AMS 6382. AMS 6529				20		20	S059692		Stock	4/10/2018	\$ 2.88 / ft
Total:										186							
										199							

Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

DART
AEROSPACE

Tel (613) 632-5200

PURCHASE ORDER
PO039521

Supplier:

ACI001-VC
Acier Ouellette Inc.
935 Boul. Du Havre
Valleyfield
QC
J6S 5L1 Canada
Phone: 800 667 4248
Fax: 450 377 5696

Ship To:

1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No:

PO039521

PO Date:

4/6/18

Due Date:

4/12/18

Purchase Order

Revision:

Revision Date:

Ship-To Contact:

Lavoie, ChantalPhone:
clavoie@dartaero.com

Via:

Ground

Pymt Terms:

Net 30

Freight Terms:

Special Comments: QUOTE: SOU0093923, SOU0097336

E-MAILED
APR 06 2018

Line	Item	Part	Supplier	Description	Status	Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	M1018R1.125	M1018R1.125		MATERIAL: AISI 1018- 1025 ROUND BAR M1010S20GA AS PER MIL-S-7097 OR ASTM A108 receive ft	Firmed	4/12/18	20 ft	0 ft		\$3,243/ft	\$64.86
NOTE CUT BAR IN HALF 2 PCS 10 FT											
2	MT-A513-T- 0.8750W0.120			A513 Seamless Alloy Steel Round Tubing 0.875"dia. x 0.120" Wall MATL: AS PER ASTM A513 TYPE 5 (1020/1026)SEAMLESS ALLOY STEEL ROUND TUBING (DOM) AS PER ASTM A513 TYPE 5	Firmed	4/12/18	60 ft	0 ft		\$2.0595/ft	\$123.57
3	M6061T6B1.000X04.000			6061-T6 Bar 1.00 X 4.00 MATERIAL: 6061- T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ- 4117/4128/4115/4116 OR A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft	Firmed	4/12/18	24 ft	0 ft		\$13.245416/ft	\$317.89
4	M304R0.375			304 Round Bar 0.375 MATERIAL: AISI 304/316 SS ROUND BAR AS PER ASTM A276 NOTE: AISI 303 NOT ACCEPTABLE receive ft	Firmed	4/12/18	24 ft	0 ft		\$1.1879166/ft	\$28.51

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Line	Item	Part	Supplier	Part No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
5		MT-HRS-B-0.500X2.250			Hot Rolled Steel Bar 0.500" X 2.250" : MATL: HOT ROLLED STEEL BAR AS PER ASTM A36 OR ASTM A1011 OR 44W OR ASTM A1018 receive ft	Firmed	4/12/18	6 ft	0 ft	\$6.69667/ft	\$40.18	DAS 11 9-89
6		MT-1144-H0.250			AISI 1144 Stressproof Steel Hex Bar 0.250" MATL SPEC'S: AISI 1144 STRESSPROOF STEEL HEX BAR ASTM A311 or UNS G11440	Firmed	4/12/18	12 ft	0 ft	\$5.77/ft	\$69.24	DAS 11 9-89
7		MT-1144-H0.500			AISI 1144 Stressproof Steel Hex Bar 0.250" MATL SPEC'S: AISI 1144 STRESSPROOF STEEL HEX BAR ASTM A311 or UNS G11440	Firmed	4/12/18	20 ft	0 ft	\$1.1755/ft	\$23.51	DAS 11 9-89
8		MT-4140-R0.625			MATL SPEC'S AISI 4140 ROUND BAR MINIMUM ROCKWELL C = 20 Rc MAXIMUM ROCKWELL C = 38 Rc AS PER ASTM A29, AMS 6349, AMS 6382, AMS 6529	Firmed	4/12/18	20 ft	0 ft	\$2.878/ft	\$57.56	DAS 11 9-89
Grand Total: \$725.32												

Order Notes

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)
A026 certification of material conformance
A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents
A048 counterfeit parts avoidance, detection, mitigation and disposition program
A049 supplier awareness
Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit
www.dataerospace.com for further explanation.

Plex 4/6/18 2:44 PM dart.lavoie.chantal



DELIVERY - CLIENT

CO00082609

ACIER OUELLETTE INC.

935, Boul. du Havre
Salaberry de Valleyfield (Québec) J6S 5L1
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

Customer N°

CLI0001056

Date

2018/04/06

Delivery date

2018/04/11

Your order N°

39521

Processed by

Josianne Bourdon

Salesman

Carrier

OUELLETTE VALLEYFIELD

Credit Terme

Net 30 Days

Page

1

Billed to

DART AEROSPACE LTD

1270, ABERDEEN ST.
HAWKESBURY, Ontario, K6A 1K7

Shipped to

, Ontario,

Att : CHANTAL LAVOIE Tél.: 613-632-5200

Delivery Route 5

Instruction F-M

Product Description	Weight	Qty	U/M	PCS NB			Internal Use Only			
				CMD	EXP	B/O	IN	I	S	C
1 ROUND 4140 HEAT TREAT 5/8 (R) R4140-58H 4977 1 X 20'	20.86	20.00	PI_\$CLB		1X 20'		20'		APR 10 2018	OUT DAS 11 9-89
TRANSIT ST-JEROME LE 09/04										
3 ROUND STRESSPROOF 1/4 RANDOM NS RST-14-V 8545 1 X 12' AC15037-GR-09/04	2.00	12.00	PI_\$CLB		1X 12'		12'		APR 10 2018	DAS 11 9-89
4 ROUND STRESSPROOF 1/2 (R) RST-12 5795 2 X 20-42 12'	13.36	20.00 24.00	PI_\$CLB		2X 12'		24'		APR 10 2018	DAS 11 9-89

NIR : R-109516-6

Next Page...



ACIER OUELLETTE INC.

935, Boul. du Hâvre
Salaberry de Valleyfield (Québec) J6S 5L1
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
Fax: 450-377-5696 Mtl: 514-336-4245 Ext.: 866-456-4242

CLI0001056

2018/04/06

2018/04/11 00:00

39521

Josianne Bourdon

QUELLETTE VALLEYFIELD

Net 30 Days

2

Billed to

DART AEROSPACE LTD

1270 , ABERDEEN ST.
HAWKESBURY, Ontario, K6A 1K7

Shipped to

, Ontario,

Att : CHANTAL LAVOIE Tél.: 613-632-5200

Delivery Route 5

Instruction

Delivery Route 5

[illegible]

Conditions :

All sold and delivered materials remain the property of "Acier Quелlette Inc" until payment is made in full, complete and cashed. All lost materials are at the buyer's expense. The warranty offered by "Acier Quелlette Inc." is the same as offered and honored by the manufacturer and his warranty is transferred by "Acier Quелlette Inc." to the client. The buyer hereby accepts to respect the following conditions: Net 30 days from billing date and the buyer accepts to pay administration charges of 2% per month (24% per annum) on all past due amounts over 30 days. Any default in respect with this contract will lead to payment by acceleration and permits to the seller, at his choice to claim for the balance due or the repossession of the goods sold. All claims must be made within five (5) days with this document enclosed. Any merchandise that has been damaged, cut or modified cannot be returned. All goods returned must be with a authorization and a 25% restocking charge.

Prepared By :

Verified By:

Delivered By :	Time
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Customer's Signature

Date _____

Total (\$CAD)

CO00082609



ACIER OUELLETTE INC.

935, Boul. du Hâvre
Salaberry de Valleyfield (Québec) J65 5L1
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

Order - Factory

CO00082609

Billed to

DART AEROSPACE LTD
1270, ABERDEEN ST.
HAWKESBURY, Ontario, K6A 1K7

Shipped to

, Ontario,
Att : CHANTAL LAVOIE Tél.: 613-632-5200

Customer N°
Date
Delivery date
Your order N°
Processed by
Salesman
Carrier
Credit Terme

CLI0001056
2018/04/06

2018/04/12 12:00:00 AM
39521

Josianne Bourdon

OUELLETTE VALLEYFIELD
Net 30 Days

Delivery Route 5

Product Description	Weight	Qty	UM	PCS NB		Internal Use Only			
				CMD	EXP	B/O	IN	I	S C OUT
1 ROUND 4140 HEAT TREAT 5/8 (R) R4140-58H 1 X 20' HEAT: 75061935 LINE 8	20.86	20.00	PI_\$CLB	1.00					
TRANSIT ST-JEROME LE 09/04				0.00					
3 ROUND STRESSPROOF 1/4 RANDOM NS RST-14V 1 X 12' AC15032-GR-019704 heat 20450880 LINE 6	2.00	12.00	PI_\$CLB	1.00					
4 ROUND STRESSPROOF 1/2 (R) RST-12 2 X 12' heat number 20504590 LINE 7	13.36	20.00	PI_\$CLB	1.00					
SURCHARGE ENERGETIQUE FRAIS_ENERGETIQUE			\$	0.00					



ACIER OUELLETTE INC.

935, Boul. du Havre
Salaberry de Valleyfield (Québec) J6S 5L1
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

Order - Factory

CO00082609

Billed to

DART AEROSPACE LTD

1270, ABERDEEN ST.
HAWKESBURY, Ontario, K6A 1K7

Shipped to

, Ontario,

Att: CHANTAL LAVOIE Tél.: 613-632-5200

Delivery Route 5

Customer N°
Date
Delivery date
Your order N°
Processed by
Salesman
Carrier
Credit Terme

CLI0001056
2018/04/06
2018/04/12 12:00:00 AM
39521
Josianne Bourdon

OUELLETTE VALLEYFIELD
Net 30 Days

Product Description	Weight	Qty	UM	PCS NB			Internal Use Only		
				CMD	EXP	B/O	IN	I	S C
1 ROUND 4140 HEAT TREAT 5/8 (R) R41140-58H 1 X 28" HEAT: 75061935 TRANSIT ST-JEROME LE 09/04	20.86	20.00	PI_\$CLB	1.00					OUT
3 ROUND STRESSPROOF 1/4 RANDOM NS RST-14-V 1 X 12" AC15037-GR-09/04 heat to follow	2.00	12.00	PI_\$CLB	1.00					
4 ROUND STRESSPROOF 1/2 (R) RST-12 2 X 12" heat number 20504590 SURCHARGE ENERGETIQUE	13.36	20.00	PI_\$CLB	1.00					
FRAIS_ENERGETIQUE			\$	0.00					

Conditions :

All sold and delivered materials remain the property of "Acier Ouellette Inc." until payment is made in full, complete and cashed. All lost materials are at the buyer's expense. The warranty offered by "Acier Ouellette Inc." is the same as offered and honored by the manufacturer and his warranty is transferred by "Acier Ouellette Inc." to the client. The buyer hereby accepts to respect the following conditions: Net 30 days from billing date and the buyer accepts to pay administration charges of 2% per month (24% per annum) on all past due amounts over 30 days. Any default in respect with this contract will lead to payment by acceleration and permits to the seller, at his choice to claim for the balance due or the repossession of the goods sold. All claims must be made within five (5) days with this document enclosed. Any merchandise that has been damaged, cut or modified cannot be returned. All goods returned must be with our authorization and are subject to a 25% restocking charge.

Prepared By :

Verified By :

Delivered By :

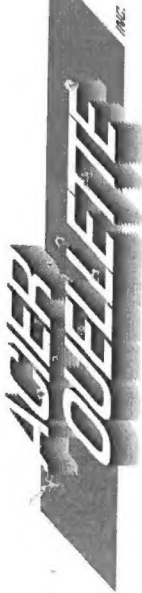
Time

Customer's Signature

Y M D

Total (\$CAD)
Deposit
Balance

174.31
0.00
174.31



ACIER OUELLETTE INC.

935, Boul. du Hâvre
Salaberry de Valleyfield (Québec) J6S 5L1
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

DELIVERY - CLIENT

Customer N° CLI0001056
Date 2018/04/06
Delivery date **2018/04/10**
Your order N° 39521
Processed by Josianne Bourdon
Salesman
Carrier OUELLETTE VALLEYFIELD
Credit Terme Net 30 Days
Page 1

Copy CO00082603

Billed to

DART AEROSPACE LTD
1270, ABERDEEN ST.
HAWKESBURY, Ontario, K6A 1K7

Shipped to

, Ontario,

Att : CHANTAL LAVOIE Tél.: 613-632-5200

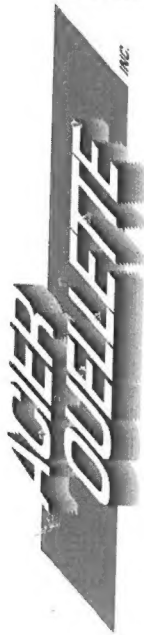
Delivery Route 5

Instruction F-M

Product Description	Weight	Qty	U/M	PCS NB		Internal Use Only			
				CMD	EXP	B/O	IN	I	S C
1 ROUND CR 1 1/8 1018 (R) RCR-118 1 X 20' R/L HEAT: 137590 5264	67.60	20.00	PI_\$CLB		1x19"		20'		APR 10 2018 DAS 11 9-89
2 TUBE MEC 0.875 OD X .120 (R) TME-0875120 3 X 20' R/L HEAT: A354330 6787	58.08	60.00	PI_\$CPI		3x38"		69'		APR 10 2018 DAS 11 9-89
3 FLAT ALU 1 X 4 6061-T6 * FAL-14 2 X 12' HEAT: 68708 2532	115.20	24.00	PI_\$CLB		3x12"		24'		APR 10 2018 DAS 11 9-89
4 ROUND SS 378 304 (R) RSS-38 2 X 12' R/L HEAT: 646M 5768	9.02	24.00	PI_\$CLB		1x12"		24'		APR 10 2018 DAS 11 9-89

NIR : R-109516-6

Next Page...



DELIVERY - CLIENT

Copy CO00082603

ACIER OUELLETTE INC.

935, Boul. du Havre
Salaberry de Valleyfield (Québec) J6S 5L1
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

Customer N°

CLI0001056

Date

2018/04/06

Delivery date

2018/04/10

Your order N°

39521

Processed by

Josianne Bourdon

Salesman

Carrier

OUELLETTE VALLEYFIELD

Credit Terme

Net 30 Days

Page

2

Billed to

DART AEROSPACE LTD
1270, ABERDEEN ST.
HAWKESBURY, Ontario, K6A 1K7

Shipped to

, Ontario,

Att : CHANTAL LAVOIE Tél.: 613-632-5200

Delivery Route 5

Instruction F-M

Product Description	Weight	Qty	U/M	PCS NB		Internal Use Only			
				CMD	EXP	B/O	IN	I	S C
5 PLATE 44W 1/2 RANDOM P44-12-V 4062 1 X 2 1/4" X 72" heat: 724995 COUPE AU FEU FEU 3	30.60	1.50	PIZ_\$CLB						
		1.00	UN						
Total Weight (Lbs) : 280.50				NIR : R-109516-6					

Conditions :

All sold and delivered materials remain the property of "Acier Ouellette Inc" until payment is made in full, complete and cashed. All lost materials are at the buyer's expense. The warranty offered by "Acier Ouellette Inc." is the same as offered and honored by the manufacturer and his warranty is transferred by "Acier Ouellette Inc." to the client. The buyer hereby accepts to respect the following conditions: Net 30 days from billing date and the buyer accepts to pay administration charges of 2% per month (24% per annum) on all past due amounts over 30 days. Any default in respect with this contract will lead to payment by acceleration and permits to the seller, at his choice to claim for the balance due or the repossession of the goods sold. All claims must be made within five (5) days with this document enclosed. Any merchandise that has been damaged, cut or modified cannot be returned. All goods returned must be with our authorization and are subject to a 25% restocking charge.

Prepared By :

Verified By : *Am*

Delivered By :

Time

Y	M	D

Customer's Signature

Date

Total (\$CAD)



Order - Factory

CO000082609

Product Description	Weight	Qty	UM	PCS NB			Internal Use Only			
				CMD	EXP	B/O	IN	I	S	C
Conditions : All sold and delivered materials remain the property of "Ader Ouellette Inc." until payment is made in full, complete and cashed. All lost materials are at the buyer's expense. The warranty offered by "Ader Ouellette Inc." is the same as offered and honored by the manufacturer and his warranty is transferred by "Ader Ouellette Inc." to the client. The buyer hereby accepts to respect the following conditions: Net 30 days from billing date and the buyer accepts to pay administration charges of 2% per month (24% per annum) on all past due amounts over 30 days. Any default in respect with this contract will lead to payment by acceleration and permits to the seller, at his choice to claim for the balance due or the repossession of the goods sold. All claims must be made within five (5) days with this document enclosed. Any merchandise that has been damaged, cut or modified cannot be returned. All goods returned must be with our authorization and are subject to a 25% restocking charge.				Total Weight (LBS) : 36.22			NIR : R-109516-6			
Prepared By :	Verified By :	Delivered By :	Time	Customer's Signature			Y	M	D	
							Total (\$CAD)			174.31
							Deposit			0.00
							Balance			174.31

P.O. 15037N

CERTIFICATE OF TEST

DART

CUSTOMER ORDER NUMBER

CUSTOMER PART NUMBER

0001

501719

SOLD TO:

Certification Date 14-AUG-2017

Invoice Number T127467

Page 01 of 02

Description: STRESSPROOF® CF BAR ASTM A311 CL B

1/4 RD X 12' R/L

HEAT: 20450860

ITEM: 501719

Line Total: 11 LB

Specifications: ASTM A108 13

ASTM A311 CL B 10

ASTM A29/A29M 15

CHEMICAL ANALYSIS

C	0.42	MN	1.39	P	0.011	S	0.273	SI	0.20	NI	0.04	CR	0.07	MO	0.02
CU	0.08	AL	0.001	V	0.002	N	0.006	B	0.0001	NR	0.001				
RCPT: K240971															

COUNTRY OF ORIGIN : USA

MECHANICAL PROPERTIES

DESCRIPTION	YLD STR	PSI	108556.0	ULT TEN	PSI	122156.0	%ELONG	IN 02 IN	16.2	%RED	IN AREA	47.8	HARDNESS	RC	24
-------------	---------	-----	----------	---------	-----	----------	--------	----------	------	------	---------	------	----------	----	----

GRAIN SIZE : 5

The above data were generated from the manufacturer's Certificate of Test after verification results remain on file subject to examination.
We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any special condition forming a part of the description.
The withdrawal recording of false, fictitious, or fraudulent statements in connection with test results may be punishable as a felony under Federal statutes.

Material did not come in contact with mercury while in our possession.
TERRY GALBRAITH

MANAGER, CORPORATE PURCHASING

11-11-11
11-11-11
11-11-11

CERTIFICATE OF TEST

Page 02 of 02

Certification Date 14-AUG-2017

Invoice Number T127467

CUSTOMER ORDER NUMBER

FRANCINE
CUSTOMER PART NUMBER

0001 501719

SOLD TO:

Description:

1/4 RD X 12' K/L

HEAT: 20450880

ITEM: 501719

Line Total: 11 LB

STRAND CAST

MATERIAL IS FREE FROM MERCURY CONTAMINATION
NO WELD REPAIR PERFORMED ON MATERIAL

COMMENTS

GRAIN PRACTICE COARSE

SOURCE/MELTED CHARTER STEEL - OHIO (USA)

RED. RATIO 997.8:1

MELTED & WEG IN USA

The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination.

We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any specification forming a part of the description.

The written recording of this, however, or fraudulent statements in connection with test results may be punishable as a felony under Federal statute.

Material did not come in contact with mercury while in our possession.
TERRY GALBRAITH

MANAGER, CORPORATE PURCHASING

CERTIFICATE OF TEST CERTIFICAT D'ESSAIS

CUSTOMER ORDER NUMBER
NUMERO DE COMMANDE DU CLIENT

AC00005079

PART NUMBER/NUMERO DE PIÈCE

506255

SOLD TO:
VENDU A:

ACIER OUELLETTE INC

SHIP TO:
EXPÉDIE A:

ACIER OUELLETTE INC

22 BOULEVARD J-F KENNEDY
ST JEROME QC J7Y 4B6

22 BOULEVARD J F KENNEDY
SAINT JEROME QC J7Y 4

Description: 4140/4142 HR ANN BAR ASTM A322

Line Total: 426 LB

5061935

ITEM: 506255

Specifications:

ASTM A304 05
EN 10204 3.1 04
ASTM E112
ASTM E381
SAE J422
ASTM A304 11
ASTM A255
ASTM A304 02

CHEMICAL ANALYSIS

C	G	MN	P	S	SI	NI	CR	MO
0.40	0.97	0.007	0.026	0.25	0.23	0.86	0.16	
CU	SN	AL	V	NB				
0.21	0.01	0.023	0.002	0.002				

COUNTRY OF ORIGIN : USA

"The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination. Les informations ci-haut-mentionnées sont transcrits du certificat d'essais du fabricant après vérification de l'état complet des spécifications inscrites sur le certificat. Ici, les présentes, nous certifions que le matériel couvert par ce rapport bien meet the applicable requirements described herein, including any specification forming a part of the description. After the present, nous certifions que le matériel couvert par ce rapport ne contient pas de fausses déclarations ou frauduleuses renseignements en rapport avec le résultat des essais sont punissables en vertu des lois fédérales.

MANAGER QUALITY ASSURANCE
GERANT DE L'ASSURANCE QUALITÉ

JOANNE DESPRES

Valenat did not come in contact with mercury while in our possession. Par les présentes, nous certifions que le matériel couvert par ce rapport ne contient pas de fausses déclarations ou frauduleuses renseignements en rapport avec le résultat des essais sont punissables en vertu des lois fédérales.

Certification Date 25-APR-2017

ARANA Y LUPARDO, 2
48490 UGAO-MIRAVALLÉS/VIZCAY
Tfno.: 946480211
Fax: 946480128
Email: calpradera@calpraderospadrea.es
www.calpraderospadrea.es

CERTIFICADO DE CALIDAD/QUALITY REPORT

De acuerdo a / Made according to:

EN 10204/DIN 50049 3.1

3.1

Nº CERTIFICADO / CERTIFICATE NR.: 45927

ALBARAN 45927

Delivery Note No.

NOTES: 10/27

Productos Calibrados de acero. Condiciones técnicas de suministro.

Bright steel products. Technical delivery conditions.

PRODUCTO SOLICITADO / PRODUCT ACCORDING ASTM A108

N.º FOLIO	FECHA	CONTENIDO	VALOR	FECHA	CONTENIDO	VALOR
PAR-46825	12.14	RED. ESTIMADO 31,75 (1/14)	980	13.72	40	31,75
PAJ-46961	10.18	CUA. ESTIMADO 12,70 (1/2)	2.034	13.72	45	12,70
SM-46716	10.18	CUA. ESTIMADO 25,40 (1)	1.020	13.74	50	25,40
OU-47016	10.18	RED. ESTIMADO 22,23 (7/8)	990	13.75	08	22,23
MJP-46937	10.18	CUA. ESTIMADO 12,70 (1/2)	994	13.75	55	12,70
MJP-46937	10.18	RED. ESTIMADO 31,75 (1/14)	1.994	13.75	58	31,75
PAJ-46981	10.18	RED. ESTIMADO 12,70 (1/2)	874	13.93	37	12,70
PAJ-46981	10.18	RED. ESTIMADO 15,88 (5/8)	902	13.95	61	15,88
PAJ-46981	10.18	RED. ESTIMADO 25,40 (1)	2.892	13.77	33	25,40
PAJ-46981	12.14	RED. ESTIMADO 25,40 (1)	1.060	20.22	50	25,40
OU-47021	10.18	RED. ESTIMADO 28,58 (1/8)	1.006	13.79	90	28,58
PAR-47159	12.14	RED. ESTIMADO 7,94 (5/16)	1.000	13.77	36	9,53
OU-47021	10.18	RED. ESTIMADO 12,70 (1/2)	922	20.22	48	7,94
OU-47021	10.18	CUA. ESTIMADO 12,70 (1/2)	1.026	13.75	89	12,70
MN-47068	12.14	RED. ESTIMADO 15,88 (5/8)	992	13.77	29	15,88
MN-47068	12.14	RED. ESTIMADO 63,50 (2 1/2)	998	13.77	32	63,50
MN-47068	12.14	RED. TORNEADO 82,55 (3 1/4)	1.090	13.77	33	82,55
CA-46385	10.18	CUA. ESTIMADO 28,58 (1/8)	1.694	20.22	38	19,05
			1.020	13.81	86	28,58

MEDIDA		OF		COLADA		C		Ct		Ca		Mg		Ni		P		S		Si	
31.75	0.00	137240	40676 G	0.070	0.025	0.022	1.145	0.010	0.020	0.046	0.271	0.300	0.012	12.70	0.00	137245	40878 S	0.160	0.000	0.000	0.254
25.40	0.00	137450	40439 SR	0.180	0.000	0.000	0.760	0.000	0.000	0.000	0.017	0.000	0.028	25.40	0.00	137508	40717 G	0.160	0.000	0.000	0.130
12.70	0.00	137555	40878 S	0.160	0.000	0.000	0.766	0.000	0.000	0.000	0.014	0.000	0.026	31.75	0.00	137558	40919 G	0.160	0.000	0.000	0.194
12.70	0.00	130937	38275 A	0.152	0.000	0.000	0.767	0.000	0.000	0.009	0.006	0.006	0.194	15.88	0.00	137561	40759 G	0.155	0.000	0.000	0.119
25.40	0.00	137733	40345 IS	0.080	0.000	0.000	1.110	0.000	0.000	0.000	0.009	0.011	0.010	28.58	0.00	137738	40929 W	0.070	0.140	0.220	0.020
12.70	0.00	137589	40878 S	0.160	0.000	0.000	0.766	0.000	0.000	0.000	0.000	0.000	0.000	12.70	0.00	137589	40878 S	0.160	0.000	0.000	0.254
7.94	0.00	202248	40859 OC	0.080	0.007	0.012	0.990	0.001	0.018	0.061	0.270	0.310	0.001	7.94	0.00	202248	40859 OC	0.080	0.007	0.012	0.001
9.53	0.00	137756	40673 GM	0.160	0.000	0.000	0.720	0.000	0.000	0.011	0.000	0.010	0.160	9.53	0.00	137756	40673 GM	0.160	0.000	0.000	0.130
28.58	0.00	137590	40910 G	0.155	0.000	0.000	0.635	0.000	0.000	0.000	0.013	0.000	0.016	28.58	0.00	202258	40816 G	0.080	0.045	0.109	0.130
25.40	0.00	137733	40345 IS	0.080	0.000	0.000	1.110	0.000	0.000	0.000	0.000	0.000	0.010	25.40	0.00	137733	40345 IS	0.080	0.000	0.000	0.010
12.70	0.00	137589	40878 S	0.160	0.000	0.000	0.766	0.000	0.000	0.000	0.000	0.000	0.000	12.70	0.00	137589	40878 S	0.160	0.000	0.000	0.000
18.05	0.00	202238	40817 AG	0.070	0.077	0.012	1.100	0.011	0.019	0.055	0.310	0.290	0.003	18.05	0.00	202238	40817 AG	0.070	0.077	0.012	0.003
28.58	0.00	138186	40440 SR	0.160	0.000	0.000	0.710	0.000	0.000	0.017	0.000	0.040	0.130	28.58	0.00	138186	40440 SR	0.160	0.000	0.000	0.130



ARANA Y LUPARDO, 2
48490 UGAO-MIRAVALLS/VIZCAYA (SPAIN)
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www.calibradospradera.es

CERTIFICADO DE CALIDAD/QUALITY REPORT

De acuerdo a / Made according to:

EN 10204/DIN 50049

3.1

Nº CERTIFICADO / CERTIFICATE NR.: 45927

ALBARAN 45927	DELIVERY Note Nr.
CIENTE LES ACIERS TRANSBEC (1997) LTÉE	CUSTOMER

Productos Calibrados de acero. Condiciones técnicas de suministro.

Bright steel products. Technical delivery conditions.

Características mecánicas / Mechanical properties

MEJORA	OR	COLADA	Reducción Tens. strength N/mm ²	Lim. elástico Yield point 0,2% N/mm ²	Alargamiento Elongation Lo=50 mm	Dureza HB Hardness	Restricción %
31,75	137240	40676 G	525,92	512,03	25,00	176,00	47,11
12,70	137245	40878 S	600,00	559,00	15,10	190,00	0,00
25,40	137450	40439 SR	511,00	358,00	33,30	190,00	0,00
22,23	137508	40717 G	625,03	599,51	24,20	185,00	55,97
12,70	137555	40878 S	600,00	559,00	15,10	190,00	0,00
31,75	137558	40919 G	581,40	560,00	32,74	176,00	51,73
12,70	130937	38275 A	653,05	610,77	19,38	210,00	62,67
15,88	137561	40759 G	656,99	639,55	16,40	190,00	58,82
25,40	137773	40652 G	591,90	576,41	25,44	176,00	59,77
25,40	202250	40816 G	581,48	565,65	20,54	180,00	42,92
28,58	137590	40910 G	568,80	546,30	32,76	169,00	59,00
9,53	137736	40673 GM	684,30	619,80	16,54	210,00	62,06
7,94	202248	40859 OC	548,10	518,80	11,92	159,00	57,27
12,70	137589	40878 S	600,00	559,00	15,10	190,00	0,00
15,88	137729	40956 G	585,51	565,74	15,42	172,00	48,83
63,50	137732	40929 W	410,00	234,00	25,80	0,00	0,00
82,55	137733	40345 IS	0,00	0,00	0,00	125,00	0,00
19,05	202238	40817 AG	580,62	566,97	19,96	185,00	48,88
28,58	138186	40440 SR	501,00	350,00	29,00	0,00	0,00

Cálculo Superficial

DESCRIPCION	OR	Clase
12L14 RED. ESTIRADO 31,75 (1/4")	137240	3
1018 RED. ESTIRADO 22,23 (7/8")	137508	2
1018 RED. ESTIRADO 31,75 (1/4")	137558	3
1018 RED. ESTIRADO 12,70 (1/2")	130937	2
1018 RED. ESTIRADO 15,88 (5/8")	137561	2
1018 RED. ESTIRADO 25,40 (1")	137773	2
12L14 RED. ESTIRADO 25,40 (1")	202250	3
1018 RED. ESTIRADO 28,58 (1 1/8")	137590	2
1018 RED. ESTIRADO 9,53 (3/8")	137736	2
12L14 RED. ESTIRADO 7,94 (5/16")	202248	3
12L14 RED. ESTIRADO 15,88 (5/8")	137729	3
12L14 RED. ESTIRADO 63,50 (2 1/2")	137732	2
12L14 RED. TORNADO 82,55 (3 1/4")	137733	2
12L14 RED. ESTIRADO 19,05 (3/4")	202238	3



ARANA Y LUPARDO, 2
48490 UGAO-MIRAVALLS/VIZCAYA (SPAIN)
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www.calibradospradera.es

CERTIFICADO DE CALIDAD/QUALITY REPORT

De acuerdo a /Made according to:

EN 10204/DIN 50049

3.1

ALBARAN	45927	CLIENTE	LES ACIERES TRANSBRC (1997) LTBE
Delivery Note Nr.		CUSTOMER	

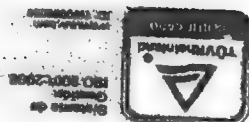
Norma : EN 10277

Productos Calibrados de acero. Condiciones técnicas de suministro.
Bright steel products. Technical delivery conditions.
Norm :
Observaciones: BARRAS DE ACERO ESTIRADAS / TORNEADAS EN FRIO SIN ALEAR

DEPARTAMENTO DE CALIDAD: Certifica que el mencionado producto cumple con las especificaciones del pedido.
QUALITY DEPARTMENT: Certify that the product fulfills the order specifications.

Fecha/Date: 09/02/2017

Firmado: Susana Fernández
Directora de Calidad



Tru-217

TPI Work Test Certificate



INDIA

THE INVESTMENTS OF INDIA LIMITED
TUBE PRODUCTS OF INDIA - MODULE - I
POST BOX NO. 4 - 13 WITH ROAD

1500

ԽԺՈՎՈՐՈՒՄ



Customer
Order No.

BOB42/13-APR-17

ONCE

1760017

Date

44-38861-184

Don't forget

PRECISION STEEL TUBES - 6046

INDEX NO.

442181505

Condition

SRK

[illegible]

Job Batch No

19-03-1703-63

Case File No.

SPRING

2023年

Imbo Marketing

mon

कक्षा

ADDITIONAL ANALYSIS

Process	Heart No.	%C	%MD	%P	%S	%SI	%AI	%C ₁	%NI	%C ₂	%NI ₂
		18	3								
		23	6	035	005						
		109	5	1008	005	080					
	A354330					039					

Heat No. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840

MS	435430	MPA	45762	MPA	57467
MX					
IN		379	448	448	448
		PLS	PLS	PLS	PLS

		84	
		HKB	
		75	
Roughness	OD	Hardness	ID

Dimensions in : Inches			
Spec	OD	ID	WT
NH	8.75	.63	240
Max	.88	.635	288
O/S-Mth	8.77	.631	267.283
O/S-Max	8.79	.633	283.016

1. FIRST: POLYMERIZATION

[illegible]

Test	Spec	Result
Strength	6.7/1000 MM MAX	0.30/1000 MM
Early Curent	100	100% TESTED OK
Vibrant		DEFECT FREE
Ultrasonic Test		

It is to certify that the goods are supplied as per the purchase order and specification Requirements

— 661115-118 : 64 parts

Signature: _____

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED

HT 02A-0100

12190

Unit Type Products of India

For Tube Investments of India

325 rue Avro
Pointe-Claire, H9R 5W3
Téléphone (514) 697-5120
Fax-simile (514) 694-8310

sapa:

**Test de dureté Rockwell
Rockwell Hardness Test**

Client / Customer: LES ACIERS TRANSBEC (1997) LTEE.

4054 BOUL. LE CORBUSIER # 201
LAVAL, QC
H7L5R2

commande Sapa / Sapa order #: 7021578

bon de commande / Purchase order #: OU-47427

de matrice / Die #: MS 16386

Alliage & trempage / Alloy & temper: 6061 T6

Longueur / Length: 3657 mm

Contrôle / Control #: 86430-1

Coulée / Cast #: 68708

Dureté Rockwell E /
Rockwell E hardness: 93 HRE

Min. requis /
Min. required: 88 HRE

Max. permis /
Max. permitted: 100 HRE

Composition chimique typique / Typical chemical composition:

	Si	Fe	Cu	Mn	Mg	Cr	Zn	P
6063	0.20 - 0.60	0.35 Max	0.10 Max	0.10 Max	0.45 - 0.90	0.10 Max	0.10 Max	0.10 Max
6005	0.60 - 0.90	0.35 Max	0.10 Max	0.10 Max	0.40 - 0.60	0.10 Max	0.10 Max	0.10 Max
6005A	0.66 - 0.74	0.14 - 0.28	0.08 - 0.16	0.18 - 0.26	0.46 - 0.54	0.03 Max	0.05 Max	0.05 Max
6061	0.40 - 0.80	0.70 Max	0.15 - 0.40	0.15 Max	0.80 - 1.20	0.04 - 0.35	0.25 Max	0.15 Max
6351	0.7 - 1.3	0.5 Max	0.10 Max	0.40 - 0.80	0.40 - 0.80	—	0.20 Max	0.20 Max

Nous certifions que le matériel fourni rencontre les exigences chimiques telles qu'annoncées par la norme ASTM B-221-14 excepté pour la section 8.2 (nombre de spécimen).

We hereby certify that the material supplied meets the chemical properties as published by the ASTM B-221-14 except for section 8.2 (number of specimen).

Sincèrement vôtre,

date: 2017-03-31

Yours truly,

Daniel Alfredo Pelletier
Directeur Qualité
Quality Director

F:07.04 rev0 Rapport de propriétés mécaniques.doc

#2507
FAL-14-12
JAA 941
47714



North American Stainless Canada Inc.
740 Imperial Road North
Guelph, ON N1K1Z3
Canada

METALLURGICAL TEST REPORT

Certificate: 373018 31 Mail To: Ship To:

Customer: 007080 003

Date: 1/19/2018 Page: 1
Steel: 304/304L
Finish: CD

Your Order: MS1116 NAS Order: IN 0257931 04 Heat Treat Code: 44,987 Corrosion: ASTM A262/15 Prac A/E OR

PRODUCT DESCRIPTION

Round Bar, Annealed, Cold Draw
UNS 30400/30403 EN 10204 3.1, ASTM A484/16
ASTM A276/17, ASTM A479/17, ASTM A182/16a CHEN ONLY,
ASME SA182/13 CHEN ONLY
AMS 5639J, AMS 5647K, AMS Q08-763D, Q08-763F, ASTM F899/12b
SOLUTION ANNEAL TEMP 1900F MIN, ASTM A320/17a CL 1 CR B8
ASTM A193/16-ASME SA193/13 CL 1 CR B8

REMARKS

COMPLIES W/REQUIREMENTS OF DPAF 252.225-7009 EU DIRECTIVE
2011/65/EU-ROHS. EAF+AOD+CC. NO WELD REPAIR. MELTED AND MFG
IN USA FREE FROM MERCURY AND LOW MELTING ALLOY CONTAMINATION

Product Id	Std & Diameter	Size	Weight	Length	Mark	Pieces	Commodity Code
BJ2280 9	.3750		1.281	144.00	11	1	

CHEMICAL ANALYSIS

CM	C %	CO %	CR %	CU %	MS %	MO %	N %	NI %	P %
US	.028	.18	18.14	.39	1.31	.280	.071	8.50	.029
ES(Spain)									
US(United States)									
ZA(South Africa)									
JP(Japan)									
Chemical Analysis per ASTM A751/14a									

MECHANICAL PROPERTIES

Product Id	1 4	MS	.2YS	UTS	RA	Ring
BJ2280 9	XL	226.0	84.97	111.55	69.24	41.70

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical
Dept. Mgr.

[Signature]

KRIS LARK

1/19/2018

4061

47919

P44-12820

49278

ERDEMİR ÇELİK FABRİKALARI T.A.Ş.
OUTSTANDING CAPITAL : 3.500.000.000 TL
PRODUCTION PLANT : ERDEMİR

CUSTOMER : WIRTH STEEL
ORDER NO : 78603208709
DIMENSIONS, mm : 12.700 X 2438 X 9866 (0.500 X 96 X 240 INCH)
STANDARD & GRADE : CSA G40.21-13 / ASTM A572-15 300M/350M / GR50 TYPE 2 (ERDEMİR 3246)
PRODUCT TYPE & DEFINITION : LKX : HOT ROLLED HEAVY PLATE WITH MILL EDGE

LOT NO.1 NO MERCURY COMPOUNDS NO WELD REPAIR
FULLY KILLED AND FINE GRAIN PRACTICE

TEST CERTIFICATE
EN 10204 - 2004 TYPE 3.1

DATE : 18/10/2017
CERTIFICATE NO : 71612651
PAGE NO : 1

PRODUCT INFORMATION				MECHANICAL PROPERTIES										CHEMICAL COMPOSITION, CAST ANALYSIS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
TICKET NO	WEIGHT (MT)	HEAT NO	COIL or PLATE NO	P.S. or P.P.	TENSILE TEST			BEND TEST		VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL

WE, THE MANUFACTURER, HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF CSA G40.21-13 / ASTM A572-15 300M/350M / GR50 TYPE 2 (ERDEMİR 3246) WITH SATISFACTORY RESULTS



NOTE : Top M.V. Middle S. End. Transverse : Longitudinal : S. Piece of Side. P.P. Piece of Plate
MERİSİS Numarası (İstanbul) Head Office : 0352-0066 4250-0020 - Trade Registry Number (İstanbul Department) : 96659 - Trade Registry Number (Ereğli Department) : 157477
Head Office : İstanbul : Barbaros Mah. Arç. 9. Sok. No 6 34745 Alibeyli / İSTANBUL - TÜRKİYE

ERDEMİR ÇELİK FABRİKASI T.A.Ş.
OUTSTANDING CAPITAL 3.500.000.000 TL
PRODUCTION PLANT ERDEMİR

CUSTOMER WIRTH STEEL
ORDER NO 76503206709
DIMENSIONS mm 12.700 X 2438 X 6096 (0.500 X 96 X 240 INCH)
STANDARD & GRADE CSA G40 21-13 / ASTM A572-15 300W/350W / GR50 TYPE 2 (ERDEMİR 3246)
PRODUCT TYPE & DEFINITION LKX HOT ROLLED HEAVY PLATE WITH MILL EDGE

LOT NO:1 NO MERCURY COMPOUNDS NO WELD REPAIR
FULLY KILLED AND FINE GRAIN PRACTICE

TEST CERTIFICATE EN 10204 : 2004 TYPE 3.1

DATE 18/10/2017
CERTIFICATE NO 71612651
PAGE NO 2

PRODUCT INFORMATION				MECHANICAL PROPERTIES				CHEMICAL COMPOSITION, CAST ANALYSIS													
TICKET	NO/WEIGHT (MT)	HEAT NO	COIL or PLATE NO	PS or P.P	ISAM POS	TENSILE TEST	BEND or TEST	VAL. VAL	Y/T	IMPACT TEST, 10 Joule POSITION	HIGH TEMP °C	C %	NI %	P %	S %	SI %	AL %	CU %	NI %	V %	N PPM
0237039599	12,276	725106	7023018046L010	8	TT	359.1 569.8 34	TT	359.1 569.8 34	TT	1 2 3	YIELD N/MT	0.191	1.223	0.019	0.003	0.194	0.030	0.023	0.042	0.076	43
		725106	72510620200110	TT	399.1 569.8 34	TT	399.1 569.8 34	TT	1 2 3	YIELD N/MT	0.191	1.223	0.019	0.003	0.194	0.030	0.023	0.042	0.076	43	
		725106	72510620200310	TT	400.1 560.0 36	TT	400.1 560.0 36	TT	1 2 3	YIELD N/MT	0.191	1.223	0.019	0.003	0.194	0.030	0.023	0.042	0.076	43	
		725106	72510620200320	TT	400.1 560.0 36	TT	400.1 560.0 36	TT	1 2 3	YIELD N/MT	0.191	1.223	0.019	0.003	0.194	0.030	0.023	0.042	0.076	43	
		725106	72510620600110	TT	399.1 559.8 34	TT	399.1 559.8 34	TT	1 2 3	YIELD N/MT	0.191	1.223	0.019	0.003	0.194	0.030	0.023	0.042	0.076	43	
0237039600	9,140	725106	72510620600120	TT	399.1 569.8 34	TT	399.1 569.8 34	TT	1 2 3	YIELD N/MT	0.191	1.223	0.019	0.003	0.194	0.030	0.023	0.042	0.076	43	
		735248	73524820100210	TT	409.9 573.7 36	TT	409.9 573.7 36	TT	1 2 3	YIELD N/MT	0.197	1.445	0.018	0.002	0.204	0.025	0.042	0.073	54		
		735248	73524820100220	TT	409.9 573.7 36	TT	409.9 573.7 36	TT	1 2 3	YIELD N/MT	0.197	1.445	0.018	0.002	0.204	0.025	0.042	0.073	54		
		7023018111L010	6	TT	407.0 584.5 34	TT	407.0 584.5 34	TT	1 2 3	YIELD N/MT	0.195	1.339	0.021	0.003	0.220	0.030	0.028	0.042	0.075	54	
		724995	72499520100110	TT	407.0 584.5 34	TT	407.0 584.5 34	TT	1 2 3	YIELD N/MT	0.195	1.339	0.021	0.003	0.220	0.030	0.028	0.042	0.075	54	
0237039501	6,060	724995	72499520100120	TT	400.1 576.6 36	TT	400.1 576.6 36	TT	1 2 3	YIELD N/MT	0.195	1.339	0.021	0.003	0.220	0.030	0.028	0.042	0.075	54	
		724995	72499520100220	TT	400.1 576.6 36	TT	400.1 576.6 36	TT	1 2 3	YIELD N/MT	0.195	1.339	0.021	0.003	0.220	0.030	0.028	0.042	0.075	54	
		724995	72499520100310	TT	407.0 584.5 34	TT	407.0 584.5 34	TT	1 2 3	YIELD N/MT	0.195	1.339	0.021	0.003	0.220	0.030	0.028	0.042	0.075	54	
		724995	72499520100320	TT	407.0 584.5 34	TT	407.0 584.5 34	TT	1 2 3	YIELD N/MT	0.195	1.339	0.021	0.003	0.220	0.030	0.028	0.042	0.075	54	
		7023018112L010	4	TT	409.1 576.6 36	TT	409.1 576.6 36	TT	1 2 3	YIELD N/MT	0.195	1.339	0.021	0.003	0.220	0.030	0.028	0.042	0.075	54	
724995	72499520160410	TT	400.1 576.6 36	TT	400.1 576.6 36	TT	1 2 3	YIELD N/MT	0.195	1.339	0.021	0.003	0.220	0.030	0.028	0.042	0.075	54			
		724995	72499520100340	TT	400.1 576.6 36	TT	400.1 576.6 36	TT	1 2 3	YIELD N/MT	0.195	1.339	0.021	0.003	0.220	0.030	0.028	0.042	0.075	54	
		735248	73524820100340	TT	409.9 573.7 36	TT	409.9 573.7 36	TT	1 2 3	YIELD N/MT	0.195	1.339	0.021	0.003	0.220	0.030	0.028	0.042	0.075	54	

WE (THE MANUFACTURER) HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF CSA G40 21-13 / ASTM A572-15 300W/350W / GR50 TYPE 2 (ERDEMİR 3246) WITH SATISFACTORY RESULTS



NOTE: T Top, M Middle, E End, T Transverse, L Longitudinal, P 2 Piece of Slice, P.P Piece of Plate
MERSİS Number (İstanbul Head Office): 0552 0906 4260 0000 Trade Reg. No. 6 34745 Ataşehir / İSTANBUL - TÜRKİYE
Head Office (İstanbul): Barbaros Mah. Ardiç Sok. No. 6 34745 Ataşehir / İSTANBUL - TÜRKİYE



www.erdemir.com.tr

ERDEMİR ÇELİK FABRİKASI
OUTSTANDING CAPITAL 3.500.000.000 TL
ERDEMİR

CUSTOMER : WIRTH STEEL
ORDER NO : 78603208709
DIMENSIONS : 12.700 X 2438 X 6096 (0.500 X 96 X 240 INCH)
STANDARD & GRADE : CSA G40.21-13 / ASTM A572-15 300W/350W / GR50 TYPE 2 (ERDEMİR 3246)
PRODUCT TYPE & DEFINITION : LKX : HOT ROLLED HEAVY PLATE WITH MILL EDGE

TEST CERTIFICATE
EN 10204 - 2004 TYPE 3.1

DATE : 18/10/2017
CERTIFICATE NO : 71612651
PAGE NO : 3

LOT NO.1 NO MERCURY COMPOUNDS NO WELD REPAIR
FULLY KILLED AND FINE GRAIN PRACTICE

PRODUCT INFORMATION				MECHANICAL TEST										CHEMICAL COMPOSITION, CAST ANALYSIS										
TICKET	NO/WEIGHT	HEAT NO	COIL or PLATE NO	PS or P.P	SAM POS	TENSILE TEST	BEND or TEST	Y/T or HARDNESS	1	2	3	AVR	TEMP °C	YIELD N/MM2	C %	MN %	P %	S %	SI %	AL %	CU %	NI %	V %	N PPM
0237035602	3.140	735246	73524820100420		TT	409.9	573.7	36							C.197	1.445	0.018	0.002	0.204	0.025	0.025	0.042	0.073	54
		735248	70230182551010	2	TT	399.1	561.9	38							0.197	1.445	0.012	0.002	0.204	0.025	0.025	0.042	0.073	54
0237035603	3.080	735248	73524820400420		TT	395.1	561.9	38							0.197	1.445	0.016	0.002	0.204	0.025	0.025	0.042	0.073	54
		735353	70230183471010	2	TT	437.4	591.3	32							0.182	1.250	0.018	0.007	0.190	0.033	0.025	0.040	0.078	50
0237035604	3.050	735353	73535320900320		TT	437.4	591.3	32							0.182	1.250	0.018	0.007	0.190	0.033	0.025	0.040	0.078	50
		735252	70230183791010	2	TT	433.5	587.4	32							0.197	1.235	0.017	0.003	0.203	0.030	0.026	0.043	0.075	44
0237042307	13.970	735252	73525220400320		TT	433.5	587.4	32							0.197	1.235	0.017	0.003	0.203	0.030	0.026	0.043	0.075	44
		716634	70230229611010	3	TT	424.6	572.7	32							0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49
		716634	71663420500120		TT	424.6	572.7	32							0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49
		716634	71663420500210		TT	441.3	590.4	32							0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49
		716634	71663420500320		TT	441.3	590.4	32							0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49
		716634	71663420600110		TT	424.6	572.7	32							0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49
		715534	71563420600110		TT	424.6	572.7	32							0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49
		716534	71663420600210		TT	441.3	590.4	32							0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49
		716534	71663420600320		TT	441.3	590.4	32							0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49

WE, THE MANUFACTURER, HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OVERSEA PROCESS.

ASTM A572-15 300M 350M / CR60 35

WE, THE MANUFACTURER, HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXIDATION PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF CSA G40.21-13 / ASTM A572-15 300W/350W / GR50 TYPE 2 (ERDEMİR 3246) WITH SATISFACTORY RESULTS



NOTE : 1. Top, Middle, End Transverse L Longitudinal, P S Piece of Slice, P P Piece of Plate
Welds : 3. Number (Istanbul Head Office) : 0352-0066-4250-0020, Trade Registry Number (Istanbul Department) : 90655, Trade Registry Number (Eregli Department) : 157474
Head Office : İstanbul Barbaros Mah. Aralık Sok. No. 6 34746 Alışehir İSTANBUL - TURKEY



TEST CERTIFICATE
EN 10204 2004 TYPE 3.1

DATE : 18/10/2017
 CERTIFICATE NO : 71612651
 PAGE NO : 4

CUSTOMER	WIRTH STEEL
ORDER NO	:78603208709
DIMENSIONS, mm	: 12.700 X 2
STANDARD & GRADE	: CSA G40.21-1
PRODUCT TYPE & DEFINITION	LKX HOT ROL

DIMENSIONS, mm
 STANDARD & GRADE
 PRODUCT TYPE & DEFINITION
 : 12.700 X 2438 X 6096 (0.500 X 96 X 240 INCH)
 : CSA G40.21-13 / ASTM A572-15 300W/350W / GR50 TYPE 2 (ERDEMIR 3246)
 LKX - HOT ROLLED HEAVY PLATE WITH MILL EDGE

LOT NO.: NO MERCURY COMPOUNDS NO WELD REPAIR
FULLY KILLED AND FINE GRAIN PRACTICE

PRODUCT INFORMATION

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CHEMICAL COMPOSITION, CAST ANALYSIS

[illegible]

WE, THE MANUFACTURER, HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF
CSA G40 21-13 / ASTM A572-5 300M/350M / GR50 TYPE 21E/GR50R 32461 WITH SATISFACTORY RESULTS.



NOTE: 1 Top W Middle E End T Transverse L Longitudinal P Piece of Slice P Piece of Plate
JESSIS Nasser (Istanbul Head Office) 0342-6005-4260-0020 Trade Registry Nasser Istanbul Department
Head Office Istanbul, Barbaros Mah. Ardic Sok. No. 6 34786 Alibeyir ISTANBUL TURKEY



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TEST CERTIFICATE
EN 10204 2004 TYPE 3.1

DATE : 18/10/2017
CERTIFICATE NO : 71612651
PAGE NO : 5

CUSTOMER
ORDER NO

DIMENSIONS, mm
 12.700 X 2438 X 6096 (0.500 X 96 X 240 INCH)
 STANDARD & GRADE : CSA G40.21-3 / ASTM A572-15 300W/350W / GR50 TYPE 2 (ERDEMIR 3246)
 PRODUCT TYPE & DEFINITION : LKK - HOT ROLLED HEAVY PLATE WITH MILL EDGE

LOT NO:1 NO MERCURY COMPOUNDS NO WELD REPAIR
FULLY KILLED AND FINE GRAIN PRACTICE

PRODUCT INFORMATION

MECHANICAL SOLUTIONS

CHEMICAL COMPOSITION, CAST ANALYSIS

TICKET NO (WEIGHT)	HEAT NO	COIL or PLATE NO	P.S. or P.P.	TENSILE TEST		Y/T or n	HARDI or n	IMPACT TEST, joule	HIGH TEMP °C	C										
				YIELD STRENGTH N/MM2	EL 50					1	2	3	AVR	TEMP °C	YIELD N/MM2	MN %	P %	S %	SI %	AL %
023704223012 350	716634	71663420400210	TT	441	590.4	32				10.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	45	
	716634	716634220400220	TT	441	590.4	32				10.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49	
	716634	71663420400310	TT	424	572	7				10.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49	
	716634	71663420400220	TT	424	572	7				10.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49	
	716634	71663420400110	TT	441	590.4	32				10.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49	
	716634	71663420400420	TT	441	590.4	32				10.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49	
	716634	71663420500410	TT	441	590.4	32				10.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	45	
	716634	71663420503420	TT	441	590.4	32				10.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49	
	716636	71663620100110	TT	429	563	9	34			10.187	1.217	0.021	0.006	0.168	0.026	0.028	0.044	0.076	40	
	716636	71663620100120	TT	429	563	9	34			10.187	1.217	0.021	0.006	0.168	0.026	0.028	0.044	0.076	40	
023704233012 360	716636	71663620100210	TT	427	534	5	38			10.187	1.217	0.021	0.006	0.168	0.026	0.028	0.044	0.076	40	
	716636	71663620100220	TT	427	534	5	38			10.187	1.217	0.021	0.006	0.168	0.026	0.028	0.044	0.076	40	
	716636	71663620100310	TT	429	563	9	34			10.187	1.217	0.021	0.006	0.168	0.026	0.028	0.044	0.076	40	
	716636	71663620100320	TT	429	563	9	34			10.187	1.217	0.021	0.006	0.168	0.026	0.028	0.044	0.076	40	
	716636	71663620100410	TT	427	534	5	38			10.187	1.217	0.021	0.006	0.168	0.026	0.028	0.044	0.076	40	
	716636	71663620100420	TT	427	534	5	38			10.187	1.217	0.021	0.006	0.168	0.026	0.028	0.044	0.076	40	
	716636	71663620200410	TT	427	534	5	38			10.187	1.217	0.021	0.006	0.168	0.026	0.028	0.044	0.076	40	
	716636	71663620200420	TT	427	534	5	38			10.187	1.217	0.021	0.006	0.168	0.026	0.028	0.044	0.076	40	
	727036	72703620400110	TT	432	575	7	34			10.181	1.261	0.022	0.004	0.166	0.029	0.030	0.042	0.076	45	
	727036	72703620400120	TT	432	575	7	34			10.181	1.261	0.022	0.004	0.166	0.029	0.030	0.042	0.076	45	

WE (THE MANUFACTURER) HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF
 CSA G40 21-13 / ASTM A572-15 300M/35M : G550 TYPE 2 (ENDUR 3246) WITH SATISFACTORY RESULTS



NOTE: T-Top, M-Middle, E-End, T-Transverse, L-Longitudinal, P-S Piece of Steel, P-P Piece of Plate
NERSIS Number (Israbul): Head Office) 052-0095-420-0020 Trade Registry Number (Israbul): Department:
Head Office (Israbul): Barbours Man Art & Soc Hc 3476 Alagan, ISRAEL, JERUSALEM



1. 100% 100% 100% 100%

ERDEMİR ÇELİK FABRİKASI T. A. Ş.
 PRODUCING CAPITAL : 3.500.000.000 TL
 PRODUCTION PLANT : ERDEMİR

CUSTOMER : WIRTH STEEL
 ORDER NO : 78603208709
 DIMENSIONS, mm : 12.700 X 2438 X 6096 (0.500 X 96 X 240 INCH)
 STANDARD & GRADE : CSA G40.21-13 / ASTM A572-15 300W/350W / GR50 TYPE 2 (ERDEMİR 3246)
 PRODUCT TYPE & DEFINITION : LKK : HOT ROLLED HEAVY PLATE WITH MILL EDGE

LOT NO:1 NO MERCURY COMPOUNDS NO WELD REPAIR
 FULLY KILLED AND FINE GRAIN PRACTICE

TEST CERTIFICATE
 EN 10204 - 2004 TYPE 3.1

DATE : 18/10/2017
 CERTIFICATE NO : 71612631
 PAGE NO : 6

PRODUCT INFORMATION				MECHANICAL PROPERTIES				CHEMICAL COMPOSITION CAST ANALYSIS													
TICKET NO/WEIGHT (MT)	HEAT NO	COIL or PLATE NO	P.S or P.P	TENSILE TEST	BEND or TEST	Ag or VAL	Y/T or VAL	HARDNESS	IMPACT TEST POSITION	HIGH TEMP °C	YIELD N/MM2	C %	MAN %	P %	S %	SI %	AL %	CU %	NI %	V %	N PPM
0237042338 6,180	727036	72703620400210	TT	408.9 581.5 32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45
	727036	72703620400220	TT	408.9 581.5 32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45
	727036	72703620400310	TT	432.5 575.7 34								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45
	727036	72703620400320	TT	432.5 575.7 34								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45
	727036	72703620400410	TT	408.9 581.5 32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45
0237042339 6,180	727036	72703620400420	TT	408.9 581.5 32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45
	727036	72703620400410	TT	408.9 581.5 32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45
	727036	72703620400420	TT	408.9 581.5 32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45
	727036	72703620400410	TT	408.9 581.5 32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45
	727036	72703620400420	TT	408.9 581.5 32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45
0237042341 12,390	716634	71663420400110	TT	424.6 572.7 32								0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49
	716634	71663420400120	TT	424.6 572.7 32								0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49
	716634	71663420400410	TT	441.3 580.4 32								0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49
	716634	71663420400420	TT	441.3 580.4 32								0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49
	727037	72703720300310	TT	415.8 573.7 36								0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074	45
727037	72703720300320	TT	415.8 573.7 36								0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074	45	
727037	72703720300410	TT	412.9 563.9 28								0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074	45	

WE, THE MANUFACTURER, HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BAS-C CYCLEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF CSA G40.21-13 / ASTM A572-15 300W/350W / GR50 TYPE 2 (ERDEMİR 3246) WITH SATISFACTORY RESULTS



NOTE: T: Top, M: Middle, B: Bottom, E: Edge, L: Longitudinal, P: S: Piece of Slice, P: Piece of Plate
 PERIS Number (Istanbul Head Office) 0352-0906-4260-0020 Trade Registry Number (Istanbul Department) 50555 Trade Registry Number (Ereğli Department) 157440
 Head Office : Istanbul Barbaos Mah Ardiç Sok No 6 34745 Ataşehir - İSTANBUL - TÜRKİYE



ERDEMİR VE ÇELİK FABRİKASI
OUTSTANDING CAPITAL : 3.500.000.000 TL
PRODUCTION PLANT : ERDEMİR

TEST CERTIFICATE
EN 10204 : 2004 TYPE 3.1

DATE : 18/10/2017
CERTIFICATE NO : 71612651
PAGE NO : 7

CUSTOMER : WIRTH STEEL
ORDER NO : 78603208709
DIMENSIONS, mm : 12 700 X 2439 X 6056 (2.500 X 96 X 240 INCH)
STANDARD & GRADE : CSA G40 21-13 / ASTM A572-15 300W/350W / GR50 TYPE 2 (ERDEMİR 3246)
PRODUCT TYPE & DEFINITION : LKX HOT ROLLED HEAVY PLATE WITH MILL EDGE

LOT NO:1 NO MERCURY COMPOUNDS NO WELD REPAIR
FULLY KILLED AND FINE GRAIN PRACTICE

PRODUCT INFORMATION				MECHANICAL PROPERTIES				CHEMICAL COMPOSITION, CAST ANALYSIS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
TICKET NO/WEIGHT (MT)	HEAT NO	COIL or PLATE NO	P.S or P.P	TENSILE TEST		IMPACT TEST		Y/T	HARDNESS			AVR TEMP °C			YIELD N/MM2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
				ISAW	YIELD STRENGTH N/MM2	TENSILE % EL	BEND or TEST	Ag	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3

ERDEMİR DİŞİTİR ve ÇELİK FABRİKALARI T.A.Ş.
OUTSTANDING CAPITAL - 3.500.000.000 TL
PRODUCTION PLANT
ERDEMİR

CUSTOMER
ORDER NO
DIMENSIONS, mm
STANDARD & GRADE
PRODUCT TYPE & DEFINITION

TEST CERTIFICATE
EN 10204 : 2004 TYPE 3.1

DATE : 18/10/2017
CERTIFICATE NO : 71612651
PAGE NO : 8

LOT NO:1 NO MERCURY COMPOUNDS NO WELD REPAIR
FULLY KILLED AND FINE GRAIN PRACTICE

PRODUCT INFORMATION				MECHANICAL PROPERTIES										CHEMICAL COMPOSITION CAST ANALYSIS														
TICKET NO	WEIGHT (MT)	HEAT NO	COIL or PLATE NO	P.S. or P.P	TENSILE TEST				BEND or TEST 180°	Ag or R VAL	IMPACT TEST, Joule			HIGH TEMP °C	CHEMICAL COMPOSITION CAST ANALYSIS													
					SAN POS	YIELD STRENGTH N/MM2	TENSILE % ELONG 50	VAL			VAL	VAL	1		2	3	AVR	TEMP °C	YIELD N/MM2	C %	MN %	P %	S %	SI %	AL %	CU %	Ni %	V %
727035			72703620500310	TT	432.5	575.7	34								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727036			72703620500320	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727037			72703620500330	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727038			72703620500340	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727039			72703620500350	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727040			72703620500360	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727041			72703620500370	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727042			72703620500380	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727043			72703620500390	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727044			72703620500400	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727045			72703620500410	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727046			72703620500420	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727047			72703620500430	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727048			72703620500440	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727049			72703620500450	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727050			72703620500460	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727051			72703620500470	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727052			72703620500480	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727053			72703620500490	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727054			72703620500500	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727055			72703620500510	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727056			72703620500520	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727057			72703620500530	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727058			72703620500540	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727059			72703620500550	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727060			72703620500560	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727061			72703620500570	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727062			72703620500580	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727063			72703620500590	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727064			72703620500600	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727065			72703620500610	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727066			72703620500620	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727067			72703620500630	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727068			72703620500640	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727069			72703620500650	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727070			72703620500660	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727071			72703620500670	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727072			72703620500680	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727073			72703620500690	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727074			72703620500700	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727075			72703620500710	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727076			72703620500720	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727077			72703620500730	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727078			72703620500740	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727079			72703620500750	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727080			72703620500760	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727081			72703620500770	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727082			72703620500780	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727083			72703620500790	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727084			72703620500800	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727085			72703620500810	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727086			72703620500820	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727087			72703620500830	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727088			72703620500840	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727089			72703620500850	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727090			72703620500860	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727091			72703620500870	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727092			72703620500880	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45				
727093			72703620500890	TT	432.5	575.7	32								0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0					

WE, THE MANUFACTURER, HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC
CSA G40 21:13 / ASTM A572-5 30W/35W / GR50 TYPE 2 (FEMUR 324E)
WITH SATISFACTORY RESULTS



ACIE T-Top M-Middle E-End T-Transverse L-Longitudinal P-S Piece of Slice F-Piece of Plate
 PERISIS Number: (Istanbul Head Office) 3352-9006-4260-0020 T-Base Reg. City Number/Istanbul Department
 Spec. Office Istanbul: Barbaros Mah. Arc. 9 Sok. No. 6 34746-34960-1 ISTANBUL TURKEY

[illegible]

ERDEMİR ÇELİK FABRİKASI A.Ş.
OUTSTANDING CAPITAL 3.500.000.000 TL
PRODUCT PLANT ERDEMİR

CUSTOMER WIRTH STEEL
ORDER NO 78603208709
DIMENSIONS mm 12.700 X 2438 X 6096 (0.500 X 96 X 240 INCH)
STANDARD & GRADE CSA G40.21-13 / ASTM A572-15 300W/350W / GR50 TYPE 2 (ERDEMİR 3246)
PRODUCT TYPE & DEFINITION LKX : HOT ROLLED HEAVY PLATE WITH MILL EDGE

TEST CERTIFICATE
EN 10204 : 2004 TYPE 3.1

DATE : 18/10/2017
CERTIFICATE NO : 7-612651
PAGE NO 9

LOT NO:1 NO MERCURY COMPOUNDS NO YELD REPAIR
FULLY KILLED AND FINE GRAIN PRACTICE

PRODUCT INFORMATION				MECHANICAL PROPERTIES				CHEMICAL COMPOSITION, CAST ANALYSIS													
TICKET NO/WEIGHT (MT)	HEAT NO	COIL OR PLATE NO	P.S. or P.P	TENSILE TEST	BEND TEST	Y/T or HARDNESS	IMPACT TEST, Joule	TEMP °C	C	MAN	P	S	SI	AL	CU	NI	V	N	PM		
				YIELD STRENGTH N/MM2	% EL 50	VAL	POSITION 1 2 3	YIELD N/MM2	%	%	%	%	%	%	%	%	%	%	%		
0237042356/12.340	727036	72703620600410	TT	408.9	581.5	32			0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45			
	727036	72703620600420	TT	408.9	581.5	32			0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45			
	727036	72703620700110	TT	432.5	575.7	34			0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45			
	727036	72703620700120	TT	432.5	575.7	34			0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45			
	716634	71663420300110	8	424.6	572.7	32			0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49			
	716634	71663420300120	TT	424.6	572.7	32			0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49			
	716634	71663420300210	TT	441.3	590.4	32			0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49			
	716634	71663420300310	TT	441.3	590.4	32			0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49			
	716634	71663420300320	TT	424.6	572.7	32			0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49			
	716634	71663420300410	TT	441.3	590.4	32			0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49			
	716634	71663420300420	TT	441.3	590.4	32			0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49			
	716634	71663420100110	8	424.6	572.7	32			0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49			
0237042357/12.300	716634	71663420100120	TT	424.6	572.7	32			0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	45			
	716634	71663420100210	TT	441.3	590.4	32			0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	45			
	716634	71663420100220	TT	441.3	590.4	32			0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	45			
	716634	71663420200110	TT	424.6	572.7	32			0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49			
	716634	71663420200120	TT	424.6	572.7	32			0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49			
	716634	71663420200210	TT	424.6	572.7	32			0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49			
	716634	71663420200220	TT	424.6	572.7	32			0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49			
	716634	71663420200310	TT	424.6	572.7	32			0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49			
	716634	71663420200320	TT	424.6	572.7	32			0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49			
	716634	71663420200410	TT	424.6	572.7	32			0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49			
	716634	71663420200420	TT	424.6	572.7	32			0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49			
	716634	71663420200510	8	424.6	572.7	32			0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49			

WE (THE MANUFACTURER) HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF CSA G40.21-13 / ASTM A572-15 300W/350W / GR50 TYPE 2 (ERDEMİR 3246) WITH SATISFACTORY RESULTS



NOTE : T Top, W Width, E Edge, T Transverse, L Longitudinal, S Piece of Steel, P Piece of Plate
MERSİS Number (İstanbul Head Office) 0352-3036-4266-0020 Trade Registry Number (İstanbul Department) 90659 Trade Registry Number (Ereğli Department) 1574-0020
Head Office: İstanbul, Barbaros Mah. Aidiç Sok. No 6 34745 Aliağaçlır İSTANBUL - TURKEY

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ERDEMİR ÇELİK FABRİKALARI T.A.Ş.
OUTSTANDING CAPITAL : 3.500.000.000 TL
PRODUCTION PLANT : ERDEMİR

CUSTOMER : WIRTH STEEL
ORDER NO : 78603208709
DIMENSIONS : 12.700 X 2438 X 6096 (0.500 X 96 X 240 INCH)
STANDARD & GRADE : CSA G40.21-13 / ASTM A572-5 300W/350W / GR50 TYPE 2(ERDEMİR 3246)
PRODUCT TYPE & DEFINITION : LKX HOT ROLLED HEAVY PLATE WITH MILL EDGE

TEST CERTIFICATE
EN 10204 : 2004 TYPE 3.1

DATE : 18/10/2017
CERTIFICATE NO : 71612651
PAGE NO : 10

LOT NO:1 NO MERCURY COMPOUNDS NO WELD REPAIR
FULLY KILLED AND FINE GRAIN PRACTICE

PRODUCT INFORMATION				MECHANICAL PROPERTIES				CHEMICAL COMPOSITION, CAST ANALYSIS														
TICKET NO/WEIGHT (MT)	HEAT NO	COIL or PLATE NO	PS or P.P	TENSILE TEST	(BEND or TEST) BH	VAL	YIT	IMPACT TEST	ROUTE	HIGH TEMP	C	MN	P	S	SI	AL	CU	NI	V	N	PPH	
				YIELD STRENGTH N/MM2	50	VAL	VAL	1	2	3	AVR	YIELD N/MM2	%	%	%	%	%	%	%	%	%	%
0237042358 (12.310)	716634	716634202092101	TT	441.3	590.4	32					0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	45		
	716634	716634202002201	TT	441.3	590.4	32					0.153	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49		
	716634	716634201003101	TT	424.6	572.7	32					0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49		
	716634	716634201003201	TT	424.6	572.7	32					0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49		
	716634	716634201004101	TT	441.3	590.4	32					0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49		
	716634	716634202003101	TT	424.6	572.7	32					0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49		
	716634	716634202003201	TT	424.6	572.7	32					0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49		
	716634	716634202004101	TT	441.3	590.4	32					0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49		
0237042359 (12.300)	716634	716634202004201	TT	441.3	590.4	32					0.153	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075	49		
	727037	7270372010032101	TT	412.9	563.9	28					0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074	45		
	727037	7270372010032201	TT	412.9	563.9	28					0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074	45		
	727037	7270372010033101	TT	415.8	573.7	36					0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074	45		
	727037	7270372010033201	TT	415.8	573.7	36					0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074	45		
	727037	7270372010040101	TT	412.9	563.9	28					0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074	45		
	727037	727037201004201	TT	412.9	563.9	28					0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074	45		
	727037	727037202001101	TT	415.8	573.7	36					0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074	45		
727037	727037202001201	TT	415.8	573.7	35					0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074	45			
WE, THE MANUFACTURER, HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF CSA G40 21-13 / ASTM A572-55 30BW/35BW / GRSO TYPE 2 (ERDEMIR 3245) WITH SATISFACTORY RESULTS																						

WE, THE MANUFACTURER, HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF CSA G40 21-13 / ASTM A572-5 300W/350W / GR50 TYPE 2(ERDEMİR 3246) WITH SATISFACTORY RESULTS



NOTE: T Top, B Bottom, E End, T Transverse, Longitudinal, P S-Piece of Slice, P P-Piece of Plate
MERISİS Number (İstanbul Head Office): 0352-3005-4760-0020, Trade Registry Number (İstanbul Department): 90559, Trade Registry Number (Ereğli Department): 157477
Head Office: İstanbul: Barbaros Mah. Adıgöçer Sok. No 6 34745 Ataşehir - İSTANBUL - TÜRKİYE



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ERDEMİR ve ÇELİK FABRİKALARI T.A.Ş.
OUTSTANDING CAPITAL : 3.500.000.000 TL
PRODUCTION PLANT : ERDEMİR

CUSTOMER : WIRTH STEEL
ORDER NO : 78603208709
DIMENSIONS : mm
STANDARD & GRADE : CSA G40-21-13 / ASTM A572-15 300W/350W / GR50 TYPE 2(ERDEMİR 3246)
PRODUCT TYPE & DEFINITION : LKX : HOT ROLLED HEAVY PLATE WITH MILL EDGE

TEST CERTIFICATE En 10204 - 2004 TYPE 3.1

DATE : 18/10/2017
CERTIFICATE NO : 71612651
PAGE NO : 11

LOT NO 1 NO MERCURY COMPOUNDS NO WELD REPAIR
FULLY KILLED AND FINE GRAIN PRACTICE

PRODUCT INFORMATION				MECHANICAL PROPERTIES										CHEMICAL COMPOSITION, CAST ANALYSIS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
TICKET NO/WEIGHT (MT)	HEAT NO	COIL or PLATE NO	P.S or P.P	TENSILE TEST				BEND or YIT	IMPACT TEST, joule			HIGH TEMP	C																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
				SAM POS	YIELD STRENGTH N/MM2	TENSILE EL	50	TEST	VAL	VAL	VAL	1	2	3	AVR	YIELD N/MM2	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%

WE (THE MANUFACTURER) HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF CSA G40 21-13 / ASTM A572-15 300W/350W / GR50 TYPE 2(ERDEMİR 3246) WITH SATISFACTORY RESULTS.



NOTE: T-Top, M-Middle, E-End, T-Transverse, L-Longitudinal, P-S-Piece of Slice, P-Piece of Plate
VERSIS Number (Istanbul Head Office): 0532-0006-4260-0020, Trade Registry Number (Istanbul Department): 50659, Trade Registry Number (Ereğli Department): 1574727
Head Office: İstanbul Barbağos Mah. Ardic Sok. No 6 34746 Ataşehir / İSTANBUL - TURKEY



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ERDEMİR VE ÇELİK FABRİKALARI A.Ş.
OUTSTANDING CAPITAL : 3.500.000.000 TL
PRODUCTION PLANT : ERDEMİR

CUSTOMER : WIRTH STEEL
ORDER NO : 78603208709
DIMENSIONS, mm : 12.700 X 2438 X 6096 (0.500 X 96 X 240 INCH)
STANDARD & GRADE : CSA G40 21-13 / ASTM A572-15 300M/350M / GR50 TYPE 2 (ERDEMİR 3246)
PRODUCT TYPE & DEFINITION : LUK : HOT ROLLED HEAVY PLATE WITH MILL EDGE

TEST CERTIFICATE

EN 10204 : 2004 TYPE 3.1

DATE : 18/10/2017
CERTIFICATE NO : 71612651
PAGE NO : 12

LOT NO:1 NO MERCURY COMPOUNDS NO WELD REPAIR
FULLY KILLED AND FINE GRAIN PRACTICE

PRODUCT INFORMATION				MECHANICAL				CHEMICAL COMPOSITION, CAST ANALYSIS																	
TICKET NO/WEIGHT (MT)	HEAT NO	COIL or PLATE NO	P.S or P.P	TENSILE TEST	BEND or TEST	Ag or BH	Y/T or VAL	HARD or VAL	1	2	3	AVR	TEMP °C	YIELD N/MM2	C	MN	P	S	SI	AL	CU	NI	V	N	PPM
	727037	72703729200220	TT	412.9 563.9 28	TT	415.8 573.7 36	TT	415.8 573.7 36	0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074	45							
	727037	72703720200310	TT	415.8 573.7 36	TT	415.8 573.7 36	TT	415.8 573.7 36	0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074	45							
	727037	72703720500210	TT	412.9 563.9 28	TT	412.9 563.9 28	TT	412.9 563.9 28	0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074	45							
	727037	72703720500220	TT	412.9 563.9 28	TT	412.9 563.9 28	TT	412.9 563.9 28	0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074	45							
	727037	72703720500310	TT	415.8 573.7 36	TT	415.8 573.7 36	TT	415.8 573.7 36	0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074	45							
	727037	72703720500320	TT	415.8 573.7 36	TT	415.8 573.7 36	TT	415.8 573.7 36	0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074	45							
	727037	72703720200410	TT	412.9 563.9 28	TT	412.9 563.9 28	TT	412.9 563.9 28	0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074	45							
	727037	72703720500110	TT	415.8 573.7 36	TT	415.8 573.7 36	TT	415.8 573.7 36	0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074	45							
	727037	72703720500120	TT	412.9 563.9 28	TT	412.9 563.9 28	TT	412.9 563.9 28	0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074	45							
	727037	72703720600410	TT	412.9 563.9 28	TT	412.9 563.9 28	TT	412.9 563.9 28	0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074	45							
	727037	72703720800420	TT	412.9 563.9 28	TT	412.9 563.9 28	TT	412.9 563.9 28	0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074	45							
	727036	72703620200210	TT	408.9 581.5 32	TT	408.9 581.5 32	TT	408.9 581.5 32	0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.074	45							
	727036	72703620200220	TT	408.9 581.5 32	TT	408.9 581.5 32	TT	408.9 581.5 32	0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45							
	727036	72703620300110	TT	432.5 575.7 34	TT	432.5 575.7 34	TT	432.5 575.7 34	0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45							
	727036	72703620300120	TT	432.5 575.7 34	TT	432.5 575.7 34	TT	432.5 575.7 34	0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45							
	727036	72703620300210	TT	408.9 581.5 32	TT	408.9 581.5 32	TT	408.9 581.5 32	0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075	45							

THE MANUFACTURER, HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF A GAO 21-13 / ASTM A572-15 300W/350W / GR50 TYPE 2 (EQUIMIR 3246) WITH SATISFACTORY RESULTS

WE THE MANUFACTURER HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF CSA G40 21-13 / ASTM A572-15 300M/350M / GR50 TYPE 2 (ERDEMİR 3246) WITH SATISFACTORY RESULTS



NOTE T. Top, M. Middle, End, T. Transverse, L. Longitudinal, P. S. Piece of Steel, P. P. Piece of Plate
WERS. S. Number (Istanbul Head Office) 0352-0006-4250-0020 Trade Registry Number (Istanbul Department)
Head Office : İstanbul Barbaros Mah. Ardic Sok. No. 6 34745 Ataşehir İSTANBUL - TURKEY



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ERDEMİR ÇELİK FABRİKASI T.A.Ş.
 ÜSTÜNDEKİ KAPAL 3.500.000.000 TL
 ÜRETİM YERİ ERDEMİR

CUSTOMER : WIRTH STEEL
 ORDER NO : 78603208709
 DIMENSIONS : 12.700 X 2438 X 6096 (0.500 X 96 X 240 INCH)
 STANDARD & GRADE : CSA G40.21-13 / ASTM A572-15 300W/350W / GR50 TYPE 2(ERDEMİR 3246)
 PRODUCT TYPE & DEFINITION : LKX : HOT ROLLED HEAVY PLATE WITH MILL EDGE

LOT NO:1 NO MERCURY COMPOUNDS NO WELD REPAIR
 FULLY KILLED AND FINE GRAIN PRACTICE

PRODUCT INFORMATION				MECHANICAL TESTS										CHEMICAL COMPOSITION, CAST ANALYSIS														
TICKET NO	WEIGHT (MT)	HEAT NO	COIL or PLATE NO	P.S or P.P	ISAM	TENSILE TEST		BEND or TEST	Ag or BH	Y/T or n	HARDNESS	IMPACT TEST, JOULE			TEMP °C	CHEMICAL COMPOSITION, CAST ANALYSIS												
						YIELD STRENGTH N/MM2	TENSILE STRENGTH N/MM2	ELONGATION %	VAL	VAL	VAL	1	2	3	AVER	TEMP °C	C	MN	P	S	SI	AL	CU	NI	V	N	PPM	
727036			72703620300220	TT		408.9	581.5	32									0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075			45
727036			72703620300310	TT		432.5	575.7	34									0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075			45
727036			72703620300320	TT		432.5	575.7	34									0.181	1.261	0.022	0.004	0.198	0.028	0.018	0.042	0.075			45
716534			71653420500310	TT		424.6	572.7	32									0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075			49
716534			71653420500320	TT		424.6	572.7	32									0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075			49
716534			71653420500110	TT		424.6	572.7	32									0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075			49
716534			71653420500120	TT		424.6	572.7	32									0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075			49
716534			71653420500210	TT		424.6	572.7	32									0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075			49
716534			71653420500220	TT		424.6	572.7	32									0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075			49
716534			71653420500310	TT		424.6	572.7	32									0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075			49
716534			71653420500320	TT		424.6	572.7	32									0.193	1.246	0.022	0.004	0.206	0.033	0.027	0.049	0.075			49
727037			72703720600110	TT		415.8	573.7	36									0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074			45
727037			72703720600120	TT		415.8	573.7	36									0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074			45
727037			72703720600210	TT		412.9	563.9	28									0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074			45
727037			72703720600220	TT		412.9	563.9	28									0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074			45
727037			72703720600310	TT		415.8	573.7	36									0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074			45
727037			72703720600320	TT		415.8	573.7	36									0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074			45
727037			72703720600410	TT		412.9	563.9	28									0.184	1.264	0.024	0.004	0.197	0.033	0.022	0.042	0.074			45

THE MANUFACTURER HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN WAS MADE BY THE BASIC QUALITY CONTROL SYSTEM AND IS CONFORMANT WITH THE REQUIREMENTS OF ASTM A572-15, 300MPa MINIMUM YIELD STRENGTH, 440 2-13

WE (THE MANUFACTURER) HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF CSA G40.21-13 / ASTM A572-15 300W/350W / GR50 TYPE 2(ERDEMİR 3246) WITH SATISFACTORY RESULTS.



NOTE: T Top M Middle E End T Transverse L Longitudinal P S Piece of Slice P P Piece of Plate
 MERSİS Number (İstanbul Head Office) 0352-0365-4260-6020 Trade Registry Number (İstanbul Department) 90659 Trade Registry Number (Ereğli Department) 157472
 Head Office İstanbul Barbaros Mah Aralık Sok No: 6 34146 Ataşehir İSTANBUL - TURKEY



ERDEMİR ÇELİK FABRİKASI T.A.Ş.
OUTSTANDING CAPITAL 3.500.000 000 TL
PRODUCTION PLANT ERDEMİR

CUSTOMER : AIRTEL STEEL
ORDER NO : 78603208709
DIMENSIONS : 12 700 X 2438 X 5095 (0.500 X 96 X 240 INCH)
STANDARD & GRADE : CSA G40.21-13 / ASTM A572-15 300M/350M / GR50 TYPE 2(ERDEMİR 3246)
PRODUCT TYPE & DEFINITION : LKX HOT ROLLED HEAVY PLATE WITH MILL EDGE

LOT NO:1 NO MERCURY COMPOUNDS NO WELD REPAIR
FULLY KILLED AND FINE GRAIN PRACTICE

TEST CERTIFICATE
EN 10204 2004 TYPE 3.1

DATE : 18/10/2017
CERTIFICATE NO : 71612651
PAGE NO : 14

PRODUCT INFORMATION				MECHANICAL PROPERTIES				CHEMICAL COMPOSITION CAST ANALYSIS													
TICKET NO/WEIGHT (MT)	HEAT NO	COIL or PLATE NO	P.S or P.P	TENSILE TEST	YIELD STRENGTH N/MM2	ELONGATION %	IMPACT TEST, joule	HIGH TEMP °C	C	W	P	S	SI	AL	CU	NI	V	N	PPM		
							1 2 3														
							1 2 3														

WE, THE MANUFACTURER, HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE RULES OF CSA G40.21-13 / ASTM A572-15 300M/350M / GR50 TYPE 2(ERDEMİR 3246) WITH SATISFACTORY RESULTS



NOTE: "Top, Middle, End, Transverse" Longitudinal, P, S Piece of Slice, P, S Piece of Plate
MERCIS Number (Istanbul Head Office) 0352-0096 4260-0020, Trade Registry Number (Istanbul Department): 90659; Trade Registry Number (Ereğli Department): 157444
Head Office: İstanbul: Barbaros Mah. Arıç Sok. No 6 34746 Alışehir İSTANBUL - TURKEY

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: 1661681.000x4.000 DATE: APR 10 2018
 PO / BATCH NO.: 039521/5056687

MATERIAL CERT REC'D: yes QUANTITY RECEIVED: 24'
 QUANTITY INSPECTED: 24' QUANTITY REJECTED: 0
 THICKNESS ORDERED: 1.000 THICKNESS RECEIVED: 1.000
 SHEET SIZE ORDERED: N/A SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	<input checked="" type="checkbox"/>	
CORRECT FINISH	<input checked="" type="checkbox"/>	
CORROSION	<input checked="" type="checkbox"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/>	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/>	
CORRECT THICKNESS	<input checked="" type="checkbox"/>	
PHOTO REQUIRED	<input checked="" type="checkbox"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/>	
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/>	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	<input checked="" type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.				
RECORD RESULTS BELOW				
HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL				
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

Testers located in the Quality Office

QC 18 INSPECTION
 ENGINEERING SIGNOFF (if required)
 INSPECTED BY: DAS
 SIGNED OFF BY: _____
 DATE: 11 APR 10 2018
 DATE: 9-89

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: 6061-T6/T6510/T6511/T62 ALUMINUM BAR

SPECIFICATION:

QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)
OR ASTM B211 OR ASTM B221

PART NUMBER:

M6061T6B | T.TTT | X | WW.WWW |
THICK | WIDTH

WHERE "T.TTT" = THICKNESS IN INCHES
"WW.WWW" = WIDTH IN INCHES

E.G. 1.0" X 12.0" BAR = M6061T6B1.000X12.000

B	REMOVE QQ-A-250/11 OPTION, REFORMAT NOTES, ADD ASTM B211/B221 (ZM D7-1)	CP	08.07.13
A	NEW ISSUE	DS	01.08.08
REV		BY	DATE
DESIGN	DS		
DRAWN			
CHECKED	DS		
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	09.07.13		

DART AEROSPACE LTD	DRAWING NO.	M6061T6B	REV. B
HAWKESBURY, ONTARIO, CANADA	TITLE	6061-T6 BAR	SHEET 1 OF 1
			SCALE
			NTS

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RELEASED
2009-08-03
MAD

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-A113-T-0875W0.120 DATE: APR 10 2018
 PO / BATCH NO.: 038521/5059826

MATERIAL CERT REC'D: Yes QUANTITY RECEIVED: 69'
 QUANTITY INSPECTED: 69' QUANTITY REJECTED: 0
 THICKNESS ORDERED: W0.120 THICKNESS RECEIVED: W0.120
 SHEET SIZE ORDERED: N/A SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	<input checked="" type="radio"/> Y	
CORRECT FINISH	<input checked="" type="radio"/> Y	
CORROSION	<input checked="" type="radio"/> Y	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/> Y	
CORRECT THICKNESS	<input checked="" type="radio"/> Y	
PHOTO REQUIRED	<input checked="" type="radio"/> Y	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y	
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="radio"/> Y	
DOES THIS REQUIRE AN EXTRUSION REPORT	<input checked="" type="radio"/> Y	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.				
RECORD RESULTS BELOW				
HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL				
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

Testers located in the Quality Office

QC 18 INSPECTION
 ENGINEERING SIGNOFF (if required)
 INSPECTED BY: DAS
 DATE: APR 10 2018
 SIGNED OFF BY: _____
 DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

REV.	DESCRIPTION	ECN #	DATE	BY	APPROVED
A	NEW RELEASE	17-455	17.09.08	VM	VM
B	TYPE 5 ADDED, TEMPLATE UPDATED	17-790	17.12.13	VM	ML

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: ASTM A513 TYPE 5 (1020/1026) SEAMLESS ALLOY STEEL ROUND TUBING (DOM)


SPECIFICATION: ASTM A513 TYPE 5

PART NUMBER: MT-A513-T-[D.DDD]WT.[TTT]

WHERE D.DDD IS OUTSIDE DIAMETER IN INCHES

WHERE T.TTT IS WALL THICKNESS IN INCHES

EG. 3/4" ROUND TUBING WITH .120" WALL THICKNESS = MT-A513-T-0.750W0.120

 DART AEROSPACE <small>Hamilton, Ontario, Canada</small>	
TITLE ASTM A513 TYPE 5 (1020/1026) ALLOY STEEL ROUND TUBING (DOM)	
PART NO MT-A513-T	REV B
TOOL NO INITIALS AND DATE DESIGNED BY: VM 17/12/13 DRAWN BY: VM 12/13/2017 CHECKED BY: ML 12/20/2017 INFO REVIEW BY: DP 12/20/2017 APPROVED BY: ML 12/20/2017	
TOLERANCES: FRACTIONS & 1/8" SURFACE 8.5" ROUGHNESS SCALE: NTS SHEET 1 OF 1	
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MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M1018 R1.125 DATE: APR 10 2018

MATERIAL CERT REC'D: YES
 QUANTITY RECEIVED: 20'
 QUANTITY INSPECTED: 20'
 QUANTITY REJECTED: 0

PO / BATCH NO.: 039321/5039685

THICKNESS ORDERED: 1.125
 THICKNESS RECEIVED: 1.125
 SHEET SIZE ORDERED: N/A
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	<input checked="" type="radio"/> Y	
CORRECT FINISH	<input checked="" type="radio"/> Y	
CORROSION	<input checked="" type="radio"/> Y	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/> Y	
CORRECT THICKNESS	<input checked="" type="radio"/> Y	
PHOTO REQUIRED	<input checked="" type="radio"/> Y	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y	
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="radio"/> Y	
DOES THIS REQUIRE AN EXTRUSION REPORT	<input checked="" type="radio"/> Y	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.	RECORD RESULTS BELOW	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL						
SIZE OF TEST SAMPLE						
HARDNESS / DUROMETER READING						

Testers located in the Quality Office

OC 18 INSPECTION
 ENGINEERING SIGNOFF (if required)
 INSPECTED BY: 11
 DATE: APR 10 2018
 SIGNED OFF BY: _____
 DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 1018-1025 ROUND BAR

SPECIFICATION:

MIL-S-7097 OR ASTM A108

PART NUMBER:

M1018-R/D.D.D. WHERE D.D.D. = DIAMETER IN INCHES
DIA.

TOLERANCES:

EG. 7/8" ROUND BAR = M1018-R0.875

PER ASTM A108 AS FOLLOWS:

SIZE	TOLERANCE
UP TO 1.5" INCL.	+0.000/-0.002
OVER 1.5" TO 2.5" INCL.	+0.000/-0.003
OVER 2.5" TO 4.0" INCL.	+0.000/-0.004
OVER 4.0" TO 6.0" INCL.	+0.000/-0.005
OVER 6.0" TO 8.0" INCL.	+0.000/-0.006

RELEASED
2012-09-24

B		REFORMAT, ADD ASTM A108, ADD TOLERANCES		CP	12.09.05
A		NEW ISSUE		DS	01.06.12
REV	DESCRIPTION	BY	DATE		
DESIGN	DS				
DRAWN	CP				
CHECKED	AP				
MFG APPR					
APPROVED					
DE APPR					
DATE	12.09.05				
TITLE		DRAWING NO.			
1018-1025 ROUND BAR		M1018-R			
SCALE		REV. B			
NTS		SHEET 1 OF 1			
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DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M304R0375

DATE: APR 10 2018

MATERIAL CERT REC'D: Yes

QUANTITY RECEIVED: 24'

QUANTITY INSPECTED: 24'

QUANTITY REJECTED: 0

PO / BATCH NO.: 039521/5056688

THICKNESS ORDERED: 0.375

THICKNESS RECEIVED: 0.375

SHEET SIZE ORDERED: N/A

SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	<input checked="" type="checkbox"/>	
CORRECT FINISH	<input checked="" type="checkbox"/>	
CORROSION	<input checked="" type="checkbox"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/>	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/>	
CORRECT THICKNESS	<input checked="" type="checkbox"/>	
PHOTO REQUIRED	<input checked="" type="checkbox"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/>	
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/>	
CORRECT # ON THE MATERIAL	<input checked="" type="checkbox"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	<input checked="" type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.	RECORD RESULTS BELOW	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL	SIZE OF TEST SAMPLE	HARDNESS / DUROMETER READING				

Testers located in the Quality Office

QC 18 INSPECTION ENGINEERING SIGNOFF (if required)

INSPECTED BY: DAS DATE: 9-8 APR 10 2018

SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 304/316 SS ROUND BAR
(NOTE: AISI 303 NOT ACCEPTABLE)

SPECIFICATION: ASTM A276

PART NUMBER:

M304R0.750
DIA.

WHERE "D,DDD" = DIAMETER IN INCHES

EG. 0.75" ROUND BAR = M304R0.750

RELEASED
09/07/15

B	REFORMAT DWG, ADD SPECS (ZN D6-1),	CP	09 07 15
A	NEW ISSUE	AJS	08 03 03
REV.	DESCRIPTION	BY	DATE
DESIGN	AJS		
DRAWN	02		
CHECKED	5		
MFG. APPR.	M		
APPROVED	W		
DE APPR.			
DATE	09.07.15		
DART AEROSPACE LTD HAMMERSBURY, ONTARIO, CANADA			
DRAWING NO. M304R			
TITLE 304/316 ROUND BAR			
REV. B			
SHEET 1 OF 1			
SCALE NTS			
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MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-HR5-B-0.500x2.250 DATE: APR 10 2018

PO / BATCH NO.: 089521/5039689

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 6
 QUANTITY INSPECTED: 6
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.500
 THICKNESS RECEIVED: 0.500
 SHEET SIZE ORDERED: N/A
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	<input checked="" type="radio"/> Y	
CORRECT FINISH	<input checked="" type="radio"/> Y	
CORROSION	<input checked="" type="radio"/> Y	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/> Y	
CORRECT THICKNESS	<input checked="" type="radio"/> Y	
PHOTO REQUIRED	<input checked="" type="radio"/> Y	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y	
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y	
CORRECT # ON THE MATERIAL	<input checked="" type="radio"/> Y	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="radio"/> Y	
DOES THIS REQUIRE AN EXTRUSION REPORT	<input checked="" type="radio"/> Y	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.				
RECORD RESULTS BELOW				
HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL				
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

Testers located in the Quality Office

QC 18 INSPECTION
 INSPECTED BY: 11
 DATE: APR 10 2018
 SIGNED OFF BY: _____
 DATE: _____
 ENGINEERING SIGNOFF (if required)

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

REV.	DESCRIPTION	ECN #	DATE	BY	APPROVED
B	REMOVED LENGTH AND WIDTH DIMENSIONS	17-475	28/09/2017	SAC	WM

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL:

HOT ROLLED STEEL PLATE

SPECIFICATION:

ASTM A36 OR ASTM A1011 OR 44W OR ASTM A1018

PART NUMBER:

MT-HRS-P-[T.TTT]

EXAMPLE:

MT-HRS-P-0.750

TOLERANCES PER MANUFACTURER SPECIFICATIONS

 DART Aerospace Technology Group Canada	
TITLE HOT ROLLED STEEL PLATE	
PROJ NO.	REV
MT-HRS-P	B
DESIGN BY: SAC 09/22/2017	300 X 400 FRAGMENTS 1.0"
DRAWN BY: SAC 09/22/2017	1/2 X 1/2 ANGLE 8.5"
CHECKED: N/A 09/27/2017	1. DIMENSIONS ARE AS SPECIFIED
INFO APPR: MDP 09/27/2017	2. HOLE LOCATIONS TO PER
APPROVED: MWM 10/05/2017	3. DIMENSIONAL LIMITS APPLY
DATE: 9/27/2017	4. OTHER DATA
SCALE: NTS	WEIGHT: N/A
SHEET 1 OF 1	
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MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M7-4140-K0635 DATE: APR 10 2018
 PO / BATCH NO.: 039521/505692

MATERIAL CERT REC'D: <u>Yes</u>	QUANTITY RECEIVED: <u>20'</u>	THICKNESS ORDERED: <u>0.025</u>	THICKNESS RECEIVED: <u>0.025</u>
QUANTITY INSPECTED: <u>20'</u>	QUANTITY REJECTED: <u>0</u>	SHEET SIZE ORDERED: <u>N/A</u>	SHEET SIZE RECEIVED: <u>N/A</u>

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	<input checked="" type="radio"/> Y	
CORRECT FINISH	<input checked="" type="radio"/> Y	
CORROSION	<input checked="" type="radio"/> Y	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/> Y	
CORRECT THICKNESS	<input checked="" type="radio"/> Y	
PHOTO REQUIRED	<input checked="" type="radio"/> Y	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y	
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="radio"/> Y	
DOES THIS REQUIRE AN EXTRUSION REPORT	<input checked="" type="radio"/> Y	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.				
RECORD RESULTS BELOW				
HRC	HRB	DUR A	DUR D	WEBSTER

Testers located in the Quality Office

QC 18 INSPECTION	
ENGINEERING SIGNOFF (if required)	INSPECTED BY: <u>DAS</u>
SIGNED OFF BY: _____	DATE: <u>9-89 APR 10 2018</u>

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

REV.	DESCRIPTION	EON #	DATE	BY	APPROVED
A	NEW ISSUE	17-700	17.12.13	VM	ML


SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : **ASI 4140 ROUND BAR**
MINIMUM ROCKWELL C = 20 Rc
MAXIMUM ROCKWELL C = 38 Rc

SPECIFICATION: **ASTM A29/AMS 6349, AMS 6382, AMS 6529**

PART NUMBER: **MT-4140-R-DDD**
WHERE "D.DDD" = DIAMETER IN INCHES

EX. 4" ROUND BAR = MT-4140-R-4.000

 DART Aerospace	
TITLE AISI 4140 ROUND BAR	
PART NO MT-4140-R	REV A
DESIGNED BY: VM 17/12/13 CHECKED BY: ML 12/10/2017 APPROVED BY: ML 12/20/2017	
SCALE: NTS SHEET: 1 OF 1	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY: DAS	SIGNED OFF BY:	DATE: 9-8 APR 10 2018

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.				
TYPE OF MATERIAL	SIZE OF TEST SAMPLE	HARDNESS / DUROMETER READING	Testers located in the Quality Office	
HRC	HRB	DUR A	DUR D	WEBSTER

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y	
CORRECT FINISH	Y	
CORROSION	Y	
CORRECT GRAIN DIRECTION	Y	
CORRECT MATERIAL PER M-DRAWING	Y	
CORRECT THICKNESS	Y	
PHOTO REQUIRED	Y	
CORRECT REF # TO LINK CERT	Y	
CORRECT MATERIAL IDENTIFICATION	Y	
CORRECT M# ON THE MATERIAL	Y	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	

MATERIAL CERT REC'D: yes	THICKNESS ORDERED: 0.500
QUANTITY RECEIVED: 24'	THICKNESS RECEIVED: 0.500
QUANTITY INSPECTED: 24'	SHEET SIZE ORDERED: N/A
QUANTITY REJECTED: 0	SHEET SIZE RECEIVED: N/A

MATERIAL: M71144-H0.500	PO / BATCH NO.: 039521/503691
DATE: APR 10 2018	

MATERIAL RECEIPT INSPECTION FORM

REV.	DESCRIPTION	ECN #	DATE	BY	APPROVED
A	NEW ISSUE	18-507	18.1.17	VM	ML

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : AISI 1144 STRESSPROOF STEEL HEX BAR
SPECIFICATION: ASTM A311 of UNS G11440
PART NUMBER: MT-1144-H (D.DDD)
WHERE "D.DDD" = DIAMETER IN INCHES
EG. 5/8" HEX BAR = MT-1144-H0.625

 DART AEROSPACE		TITLE AISI 1144 STRESSPROOF STEEL HEX BAR	
PART NO. MT-1144-H		REV A	
DESIGNED BY: VM 1801/17 CHECKED BY: VM 01/17/2018 APPROVED BY: ML 01/17/2018			
DATE 18.1.17		BY VM	
DATE 18.1.17		APPROVED ML	
SCALE 1:1			
SCALE 1:1			
SCALE 1:1			

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MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-1144-H-0.250 DATE: APR 10 2018

PO / BATCH NO.: 059521/505690

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 12'
 QUANTITY INSPECTED: 12'
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.250
 THICKNESS RECEIVED: 0.250
 SHEET SIZE ORDERED: N/A
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	<input checked="" type="radio"/> Y	
CORRECT FINISH	<input checked="" type="radio"/> Y	
CORROSION	<input checked="" type="radio"/> Y	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/> Y	
CORRECT THICKNESS	<input checked="" type="radio"/> Y	
PHOTO REQUIRED	<input checked="" type="radio"/> Y	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y	
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="radio"/> Y	
DOES THIS REQUIRE AN EXTRUSION REPORT	<input checked="" type="radio"/> Y	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.				
RECORD RESULTS BELOW				
HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL				
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

Testers located in the Quality Office


QC 18 INSPECTION
 ENGINEERING SIGNOFF (if required)
 INSPECTED BY: DAS
 DATE: 9-89 APR 10 2018
 SIGNED OFF BY: _____
 DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

REV.	DESCRIPTION	ECN #	DATE	BY	APPROVED
A	NEW ISSUE	18-507	18.1.17	VM	ML

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : AISI 1144 STRESSPROOF STEEL HEX BAR
 SPECIFICATION: ASTM A311 or UNS G11440
 PART NUMBER: MT-1144-H (D.DD)
 WHERE "D.DD" = DIAMETER IN INCHES
 EG. 5/8" HEX BAR = MT-1144-H0.625

	
TITLE AISI 1144 STRESSPROOF STEEL HEX BAR	
PART NO. MT-1144-H	REV A
DESIGNED BY: VM 18/01/17 CHECKED BY: VM 01/17/2018 APPROVED BY: DP 01/17/2018 SCALE: NTS SHEET: 1 OF 1	
REVISIONS: 1. VM 18/01/17 2. VM 01/17/2018 3. DP 01/17/2018	
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